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1834



SEAMAN'S  
MEDICAL GUIDE,  
CONTAINING THE  
SYMPTOMS, CAUSES, AND TREATMENT  
OF  
DISEASES,  
AND DIRECTIONS IN  
DISLOCATIONS AND FRACTURES;  
WITH  
ADVICE  
ON THE  
PRESERVATION OF HEALTH IN HOT CLIMATES.

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BY DANFORTH P. WIGHT, M. D.

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## PREFACE.

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During fifteen years' professional labors among a people, many of whom are mariners, I have occasionally witnessed the effects resulting to seamen and passengers at sea, from their want of a knowledge of the proper application of medicine in diseases, and of surgical directions in cases of accident. Exposed as sailors are to every vicissitude of weather, to fatigue and privation and to rapid changes of climate, they are peculiarly subject to violent and rapid diseases, and more than any other class of persons, are liable to need the aid of medicine. If sickness occur during a voyage, or in port where medical assistance cannot readily be obtained, the individual may be subjected to injudicious treatment, or be left to the remedial efforts of nature, for want of proper directions in the use of the contents of the medicine chest. These medicines, however judiciously selected, can be of but little practical utility, unless accompanied with directions for their application in disease. Too large a dose may essentially injure the patient by the violence of its operation, and too small a one hazard his life by the loss of time. To supply the knowledge requisite for the proper use of these medicines by persons at sea is the object of this work.

The arrangement of the work is such as was thought would condense the most information under the several divisions, and facilitate a recurrence to each as circumstances might require. Brevity and perspicuity have been aimed at. Whatever would tend to the removal of disease, or the preservation of health, has been studiously sought for and communicated.

In the description of diseases, the most prominent symptoms of each are concisely enumerated, so that each complaint may

be readily distinguished. Though many diseases may have symptoms in common, still the aggregate of symptoms cannot fail to designate one from the other, and point out its nature and seat.

The causes of disease are given, to lessen the danger of its repetition by a knowledge of its origin. Sickness might oftentimes be escaped did persons but know the means which are likely to induce it. This is of peculiar importance in hot climates, where diseases are sudden in their attack and rapid in their course.

The mode of treatment is pointed out with minuteness, to guard against error in the selection and application of remedies; and such only are prescribed, as may be safely administered by one unacquainted with medical science. Some remedies, justly esteemed of great value by physicians, are necessarily omitted, as they can be given with safety only under the personal observation of men of professional learning and experience.

One part of the work is devoted to the treatment of dislocations, fractures, and other accidents which occasionally occur at sea, and contains all the information necessary in such cases.

Advice on the preservation of health in hot climates is added, as a means of preventing disease, and of rescuing seamen from the unseen dangers which surround them. In a hot and impure atmosphere lives are often sacrificed by slight errors, and individuals invite sickness, unconscious of the fatal tendency of the course they are pursuing. To guard seamen from exposure to unsuspected causes of disease, and to preserve their health in the midst of sickness, this part is annexed.

I have written this work with the hope that it may be useful to seamen; wishing to contribute my humble efforts, to ameliorate the sufferings, and promote the happiness of this valuable and meritorious class of citizens.

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# SEAMAN'S MEDICAL GUIDE.

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## SYMPTOMS, CAUSES, AND TREATMENT OF DISEASES.

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### FEVERS.

#### GENERAL DESCRIPTION OF FEVER.

FEVER is the most frequent of all diseases. It assumes different forms and degrees. In its mildest and simplest form, there is chilliness succeeded by increased heat of the skin; the pulse is rather more frequent than ordinary; the tongue is a little coated; with a general feeling of languor and inability to make much exertion. In a higher form, there is an increase of the heat and thirst; greater frequency of the pulse; more foulness of the tongue; a greater degree of general debility; failure of the appetite; pain and confusion in the head; and disturbed rest at night. Generally, these symptoms subside in the morning, but increase in the evening. These indications of fever may be present, in a mild degree, for a number of days, and the individual hardly persuade himself that he is laboring under fever.

In a more sudden and severe attack of fever, there is, at the commencement, rigor and shivering; great prostration of strength; paleness of the face and whole surface; pain in the head, back, and limbs; quick and small pulse; dryness of the mouth; loss of appetite and nausea; succeeded, in a few hours, by a hot and dry skin; full and frequent pulse; flushed face; coated and dry tongue; increased pain; with restlessness, and intolerance of light and noise.

All the symptoms enumerated are not to be expected in the same case; there is not any of them that may not be absent; but a number of them occurring at the same time indicate the presence of fever.

Fever retains under all forms a common character, but is modified by climate and season; the state of the atmosphere; the constitution and habits of the individual; and thus may be mild or dangerous, simple or complicated, according to the influences of country, season, and constitution.

### DIVISIONS OF FEBRILE DISEASES.

Fevers have been named according to the prominence of some symptoms. Thus, if in a period of twenty-four hours, the fever exhibits a cold, hot, and sweating stage, with an interval of freedom from the disease, it is called *Intermittent Fever*. If there be discharges of bile, or a general affection of the stomach, liver, and bowels, with yellowness of the skin, *Yellow, Remittent, or Bilious*. If the pulse be strong, quick, and full, while the sense of weakness is not great, *Inflammatory*. If there be weakness, and much disturbance of the head and nervous system, *Typhus*. If there be marks of putridity, that is, if there be a very bad smell from the body and discharges, *Putrid*. These are all closely allied, being convertible from one form to another. Fevers attended with eruptions are described under that head.

### CAUSES OF FEVER.

The most general causes of fever are, sudden changes in the weather; cold air passing over the body when heated; great fatigue; exposure to the rays of the sun in hot climates; excessive eating; abuse of spirituous liquors; but cold is the most frequent cause. Contagion may be the cause of fever in its most sudden and violent form.

### DIRECTIONS IN THE TREATMENT OF FEVER.

A seaman laboring under a greater or less degree of fever, should immediately receive every attention, which the circumstances of his situation may admit. All bodily exertion should be forbidden. He should retire to his hammock; abstinence be enjoined, and no animal food allowed. His apartment should be freely aired; the body be kept lightly covered; and cleanliness in his apparel, and in every thing around him, attended to. He should be kept as far removed as possible from all noise; excluding excess of light, and all unnecessary attendants. All this should precede the use of medicine, and be strictly regarded during his sickness.

Compare the case with the description of symptoms under the several heads of fever, and adopt the treatment directed under that, which it most nearly resembles.

not necessary except the tongue be much coated, or nausea be present. When necessary, procure gentle vomiting by giving a table-spoonful of the emetic draught\* every ten minutes, aiding the operation by drinking warm water.

Cathartics are peculiarly useful, and those of a cooling nature should be preferred. Give ten grains of calomel in molasses, to be followed in one hour by an ounce of Epsom salts dissolved in a tumbler of warm water. During the disease the bowels must be kept freely open, procuring two or more motions daily, by taking the infusion of senna,† or a solution of a tea-spoonful or two of salts or cream of tartar.

If the head be affected either with severe pain or delirium, apply a blister to the back of the neck, and to the head, linen cloths dipped in cold water, or in a mixture consisting of one table-spoonful of sulphuric ether and three of cold water.

To moderate the excess of heat, sponge the body frequently with cold water. To quench thirst, give water slightly acidulated with cream of tartar or elixir vitriol.

Apply mustard poultices‡ to the feet night and morning.

If the skin be hot and dry, give twenty drops of antimonial wine with twenty of sweet spirits of nitre every hour, and if this be too operative on the bowels occasionally add twenty drops of paregoric. Give every two hours a table-spoonful of the febrifuge mixture.§

The patient must be kept perfectly at rest in his hammock, and be supported by a light liquid diet consisting only of arrow root, sago, gruel, rice. The air of his apartment should be kept pure by being constantly renewed, without a sensible current passing over him, the temperature cool, the clothing light, and as often changed as may be necessary to maintain cleanliness.

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\* See Appendix.

† Ibid.

‡ Ibid.

§ Ibid.

## TYPHUS OR NERVOUS FEVER.

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### SYMPTOMS.

In Nervous Fever the first symptoms are slight, but, after a few days' continuance, they gradually increase. It comes on with loss of appetite; chilliness; vertigo; sense of weariness; depression of spirits; restlessness at night; followed by dull pain in the head and back; soreness of the flesh and pale countenance. The skin is hot and dry; pulse small, weak and frequent; urine pale; and tongue of a white coat. After a few days' continuance and increase of the disease, there succeed low muttering delirium, or stupor; tumbling and twitching of the hands; the tongue and teeth are covered with a dark fur; the stools are passed unconsciously, and are frequent, liquid, and foetid; the voice becomes small and altered; with bleeding of the lips and gums, or from the bowels, and profuse sweats.

The disease rarely terminates short of a fortnight, and sometimes continues much longer. It may be distinguished from other fevers, by the mildness of its approach, and by the small, weak pulse.

### CAUSES.

The usual causes of fever may excite in a feeble constitution Nervous fever, which, in a constitution more vigorous would produce fever of another form. It is often produced by many persons being confined in filthy apartments, and in a close and stagnant atmosphere, as in transport and prison ships. When many persons are exposed to these causes, those will be most susceptible, who have suffered from want of sleep, poor diet, excessive fatigue; or whose constitutions are broken by excesses.

### TREATMENT.

Bleeding in this, and in all fevers, is more necessary for seamen than for persons on shore, as they feed more on animal food, and are generally of firm and rigid fibre; and in such persons, fever is more liable in its course to be connected with local inflammation.

When there is great pain, accompanied with a sense of heat and fulness of the head; or when the patient complains of

severe suffering in the chest, which is increased on inspiration ; or of pain in the right side over the region of the liver, a pint of blood should be taken, and this may be repeated if the pain continues or returns, and the strength admit of it. Unless these indications are present, bleeding should not be performed.

After this, or if bleeding be not thought advisable, unload the stomach and bowels by giving twenty grains of ipecacuanha with eight of calomel in molasses ; this will operate as an emetic and cathartic, and is more speedy than either alone ; and repeat the dose if necessary, till the first passages are freely evacuated.

It is better in this fever to give ipecacuanha for an emetic than tartar emetic, as the latter sometimes operates too violently and debilitates the patient ; a circumstance which should be cautiously guarded against in this disease.

After a thorough evacuation of the stomach and bowels, in the beginning of the fever, it is necessary afterwards to avoid irritating the bowels by powerful cathartics ; and laxatives only should be administered, as castor oil, or infusion of senna,\* giving only enough to keep the bowels moderately open. This may be aided by the use of clysters of warm salt water, which are alone sufficient, after the patient has been many days sick.

Give ten grains of Dover's powder in a little syrup, or molasses every six hours, adding to each dose a grain of calomel for a few days, till the gums become slightly affected, when the calomel may be omitted.

Mix one ounce of antimonial wine with half an ounce each of paregoric and sweet spirits of nitre, and give a teaspoonful in a little tea every three hours.

Apply mustard poultices† to the feet, and bathe the body frequently with cold or lukewarm vinegar and water, according to the state of the skin at the time.

If the head be much affected, cut off the hair, and keep applied cloths wet with cold vinegar and water, and apply a blister to the nape of the neck.

If there be great labor of breathing, or tenderness or pressure in the right side, put a blister over the part affected.

If diarrhœa occur, give a powder containing two grains of camphor, one of ipecacuanha, and half or a grain of opium every two hours, till it be checked.

After the fever has subsided, two table-spoonfuls of the infusion of bark ‡ may be given every six hours.

During the whole course of his sickness, the patient must be supported by light nourishment, as arrow root, gruel, juice of oranges, wine and water, chicken broth, and juice of fresh meats. For drink, give toast water, lemonade, and sweetened

\* See Appendix.

† Ibid.

‡ Ibid.

water made slightly acid by the addition of a few drops of elixir vitriol.

The patient should be removed as far as possible from all noise, and his room be darkened and well ventilated.

When typhus fever occurs in a hot climate, the affusion of cold water over the naked body is a powerful remedy, particularly in the commencement of the disease. It should be employed only when the heat is above the natural standard, and when there is no chilliness nor sweat; and, with these precautions, it may be adopted at any period. When used, a bucket full may be dashed on the patient by letting it fall on the head and shoulders if sitting up, or thrown over him if in bed.

## PUTRID, MALIGNANT, OR SHIP FEVER.

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### SYMPTOMS.

The attack of Putrid Fever is sudden and violent, and its progress rapid. It generally commences with chilliness; heat; thirst; and the usual precursors of fever; but these are soon succeeded by great prostration of strength; faintness; sighing; heat and pain at the pit of the stomach; burning and pungent heat of the skin; and sinking of the countenance. The tongue, at first whitish, soon becomes dark and black; the lips and teeth are covered with a black fur; the urine is dark and offensive; there is delirium or stupor; and vomiting of dark-colored bilious matter. Symptoms of putrefaction soon follow, purple spots, like bruises, appear on the skin; the stools are black, highly offensive, and are passed involuntarily; blood issues from the mouth, nose, or bowels; the pulse intermit and sink; and the scene closes with cold, clammy sweats, hiccoughs, coldness of the extremities, and death.

It may be readily distinguished from typhus fever, by the suddenness and violence of the attack; and from other fevers, by the symptoms of putrefaction which show themselves early in the disease.

### CAUSES.

This disease is prevalent in low and marshy countries, especially when great rains are quickly succeeded by heat; where the putrefaction of animal and vegetable substances generate effluvia, which excite the disease, particularly in persons recently arrived from higher latitudes; and most readily in those, whose constitutions have been debilitated from any cause.

It also originates from human effluvia accumulated on board of ships, or other places where the space is too small for the number, the habits uncleanly, and the atmosphere stagnant and unventilated.

Many instances are recorded of putrid fever originating on board vessels loaded with grain, or vegetables, where, from the influence of moisture in a confined and heated atmosphere, the febrile poison was generated in its deadliest form.

## TREATMENT.

From the commencement of the attack, there is in putrid fever extreme debility of the whole system, and a tendency to putrefaction. Such being the character of the disease, neither bleeding, nor powerful emetics, nor cathartics are admissible generally, as they tend to debilitate the patient, and make him less able to contend with it. There may be cases, however, where all these means should be employed, and hence, those who may be called on to administer to others should not form an opinion hastily, or prescribe rashly.

If, at the first, there be indications of a crowded state of the blood-vessels of the head, denoted by low delirium and stupor; or of the lungs, by a sense of weight on the chest and difficulty of respiration; or of the liver, by pain in the right side under the short ribs and tenderness on pressure; blood-letting must be employed, taking a pint or more till the part be relieved; but under no other circumstance should blood be drawn. With these symptoms in the commencement of the disease, purgatives too will be necessary to stimulate the bowels, and draw off from the overloaded organ; giving five grains of calomel with ten of jalap, so as to procure three or four evacuations daily till relief be afforded; but where such symptoms are not present, powerful cathartics are not to be employed.

In all other cases, begin by cleansing the stomach and bowels by giving twenty grains of ipecacuanha and ten of calomel in molasses, aiding the vomiting by drinking warm water; and if the bowels be not sufficiently opened, follow this immediately with any mild laxative.

During the disease, keep the bowels gently open by giving infusion of senna,\* or Epsom salts, or rhubarb, or castor oil, governing the quantity of each according to the operative effect.

Put mustard poultices† to the feet, and wash the whole body frequently with lukewarm vinegar and water.

If there be stupor, or delirium, wash the head with cold water, and apply a blister to the forehead or back of the neck.

Give two grains of calomel with a quarter of a grain of opium every four hours till the mouth be slightly affected; if there be stupor or costiveness omit the opium, and if diarrhœa, increase it.

To procure rest, give two grains of camphor with one of opium at night.

After the stomach and bowels are evacuated, begin immediately the use of the bark, giving a table-spoonful of the decoction‡ with five drops of elixir vitriol every two hours, and this

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\* See Appendix.

† Ibid.

‡ Ibid.

quantity may be increased if the stomach will bear it. Or give a grain or two of sulphate of quinine every two hours.

In the commencement of the disease, when the surface of the body is hot and without perspiration, pour over the naked body a bucket full of cold salt water. After the disease has been of a few days' continuance, wash the whole system with cold water, whenever the skin is hot and dry.

During the entire course of the fever, the patient is to be supported by rice, arrow root, gruel, the juice of oranges, or lemonade; to which wine should be added according to the degree of debility.

He should be lightly covered with bed-clothes; his sheets and apparel frequently changed; the evacuations immediately removed, and none but necessary attendants admitted to see him. The apartment should be freely ventilated, leaving open, day and night, every avenue to a free circulation of air, securing the patient, however, from a current of cold or damp air.

### MEANS OF PREVENTING INFECTION.

The putrid fever is infectious, that is, the disease is capable of communicating itself from the sick to those in health. In all fevers of a putrid and malignant form, the atmosphere, in a confined and unventilated apartment, soon becomes loaded with effluvia from the breath, perspiration, and evacuations of the sick, which will reproduce the same disease in most persons exposed, for any length of time, to its influence. To guard against this, in every possible manner, is the imperious duty of every master of a ship, for on him alone depend all the efforts which shall be made.

Cleanliness and fresh air cannot be too earnestly insisted on, as by constant and minute attention to these particulars, the danger of infection may be almost wholly removed, and without them, all other means can avail nothing. Fumigation is an important aid in destroying an infectious atmosphere, and different modes of employing it are added, as the subject is of the utmost importance. Whenever the air of a ship from any cause becomes infectious, each of the apartments should be closed, and filled with the nitric or muriatic fumigation for an hour daily, till the whole ship be purified; or the infectious effluvia should be destroyed by the use of chloride of lime.

### NITRIC FUMIGATION.

Pour one ounce of sulphuric acid, or oil of vitriol, into an earthen vessel; let it be placed in another vessel containing heated sand or ashes; a small quantity of nitre or saltpetre

should then, from time to time, be put into the acid, and the gas required will be immediately disengaged. One or two of these fumigators may be placed in the room, and one or two on the outside of the apartment.

### MURIATIC FUMIGATION.

On one pound of common salt, put into a deep dish, pour from time to time a small quantity of oil of vitriol, which will produce the gas required.

This kind of fumigation is much used for purifying infected apartments, and clothing which has been worn by persons under contagious diseases.

### CHLORIDE OF LIME.

This preparation is the most convenient and effectual means of destroying all offensive and putrid effluvia, and of preventing infection.

To a table-spoonful of the powder of chloride of lime, add gradually one quart of water, or to one pound of the powder add three gallons of water, mix it well, and the clear liquor is then fit for use. It may be kept in bottles well corked, or mixed at the time of using it.

In putrid disorders this liquor must be sprinkled about the apartment of the sick, plentifully and frequently.

In putrid fever and other infectious diseases, in addition to sprinkling the liquor about the room, the linen taken from the patient should be immersed in the liquid immediately, and afterwards rinsed in pure water before being washed; and a wine-glass full put into the vessel before using it.

## FEVERS WITH ERUPTIONS.

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### SMALL POX.

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#### GENERAL CHARACTER.

Small Pox is a fever attended with an eruption of pustules on the skin ; and the matter contained in these pustules is capable of producing the disease in another person. Of those, who have not had the kine pock, few can be exposed to this disease for the first time and escape taking it, and there are but few instances of persons having had it twice.

The disease appears under two distinct forms, which are termed the *distinct* and *confluent* ; in the former, the eruptions are perfectly distinct from each other ; in the latter, they run into one another.

#### SYMPTOMS.

*Distinct Small Pox.* — Generally within a fortnight after a person has been exposed to the contagion of small pox, it begins to show itself in the system. The attack of small pox cannot be distinguished from that of any other fever, but the nature of the fever is known about the second or third day by the eruption, which shows itself in little red pimples on the face and neck, which gradually extend over the other parts of the body, increasing in size and number. In mild cases, the fever abates on the appearance of the eruption. About the fifth or sixth day, small clear vesicles form on the apex of the pimples, which increase in size, and become yellow, or mature about the eighth or ninth day. At this time the face often swells, and there is hoarseness and difficulty of swallowing. About the eleventh day, the pustules decay, at length form crusts, which gradually fall off, leaving either dark red spots, which remain for a considerable time, or pits which are permanent.

*Confluent Small Pox.* — In this variety, the eruptions come out sooner, are smaller, more numerous, and appear rather in a general efflorescence than in distinct pimples. They soon run into one another, and are filled with a yellowish fluid. The fever increases with the eruptions, and there is a discharge of thick

saliva. The patient becomes stupid; the head and throat are swollen and the eyes closed; the pimples unite in one mass; and the face has the appearance of a black mask.

### CAUSES.

The disease may be produced by inhaling effluvia arising from those laboring under it; or it may be communicated in apparel, or other articles retaining the matter of small pox; or by inoculation.

### TREATMENT.

As soon as the disease is discovered, separate the patient from the rest of the crew; let him be exposed to a cool air, but not so as to produce chilliness; abstain from animal food; and drink freely of lemonade, elixir vitriol, or tamarind water.

During the disease keep the bowels open by gentle laxatives, as infusion of senna,\* or castor oil, or cream of tartar. Five grains of calomel, followed by castor oil, or Epsom salts, may be given, if more thorough evacuations should be thought necessary.

If the eruptions come out slowly or imperfectly, dissolve four grains of tartar emetic in hot water, to which add twenty grains of ipecacuanha and take, aiding the vomiting by drinking warm water.

If the pulse suddenly sinks, or the disease assumes the confluent form, support the system with wine; give a table-spoonful of the decoction of bark† with five drops of elixir vitriol every three hours; and two grains of camphor with one of ipecacuanha every four hours, adding one grain of opium at night; open the bowels by clysters of warm salt water instead of medicines by the mouth, and apply mustard poultices‡ to the feet.

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\* See Appendix.

† Ibid.

‡ Ibid.

## MEASLES.

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### SYMPTOMS.

Measles, like small pox, are contagious, and seldom attack the same person twice. They commence with the ordinary symptoms of fever, which are soon followed by hoarseness; dry cough; tightness of the chest; watery secretions from the eyes and nose; swelling of the eye-lids; inflammation of the eyes, and sensibility to light; pain in the head and drowsiness. In four or five days small red spots appear on the forehead and face, which unite and form little patches with a slight elevation of the skin; these extend over the chest and back, and pass down the extremities. In three or four days the redness diminishes, leaving a mealy dryness; and the disease passes off in the course of two weeks.

### TREATMENT.

When the measles pass off well, and leave no affection of a particular organ, it will only be necessary, during their course, to abstain from stimulating food and drink; to keep the bowels moderately loose with any laxative medicine, as Epsom salts, or castor oil; and to have the apartment of an agreeable warmth, equally avoiding cold and heat.

In some cases they come out imperfectly, or suddenly recede, and then it is necessary to bring on free vomiting by dissolving eight grains of tartar emetic in half a pint of hot water, and taking a table-spoonful every ten minutes till this be effected; and afterwards ten grains of Dover's powder every six hours.

Upon the decline of the disease, if there remain a cough, apply a blister to the chest, and take every two hours twenty drops of antimonial wine; if inflammation of the eyes, apply blisters behind the ears and wash with a weak solution of sugar of lead; if diarrhœa, check it by taking a tea-spoonful of tincture of rhubarb with twenty drops of laudanum, night and morning.

# ERYSIPELAS, OR ST. ANTHONY'S FIRE.

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## DESCRIPTION.

Erysipelas is marked by a shining redness of the skin, which becomes pale for an instant if the finger be pressed upon it. Fever precedes it, and after a few days' continuance is attended with a diffuse swelling, and transparent redness of the skin on which small pimples, or blisters filled with a thin fluid. When it attacks the face, there is great redness of the face and scalp, and the swelling of the head is in some cases so great as to close the eyes. About the third or fourth day little pimples appear, which pour out an acid liquid, attended with a burning, pricking pain. As the swelling subsides, the part assumes a yellow tinge, followed by a branny scurf, or peeling off of the scarf skin. The face, arms, and legs are the parts most commonly attacked. Its duration is uncertain, but is commonly from ten to fourteen days.

Generally, erysipelas is not a severe disease; in some cases, however, it is fatal, much depending upon the former state of the health and habits. In one person it attacks only a part, while, in another, it traverses the whole surface; sometimes, it forms matter instead of scurf, inducing gangrene; sometimes it suddenly leaves the skin, affecting the brain, and causing death.

Sudden exposure to cold, intemperance, injuries, or peculiarity of constitution, are the principal causes which produce it.

## TREATMENT.

If the face be the seat of disease, attended with stupor, or delirium, denoting an affection of the brain, and the patient vigorous, a pint of blood should be drawn; but under other circumstances, bleeding is not necessary.

Free evacuations from the bowels are highly important, as they lessen the fever and inflammation. Take ten grains of calomel in molasses, and three hours after an ounce of Epsom salts dissolved in a tumbler of warm water; and continue the daily use of salts sufficiently to keep the bowels well open.

Wash the part with a solution made of an ounce of sal ammoniac in a pint of water, adding a table-spoonful of vinegar.

Apply warm poultices made of bread, and a weak solution of sugar of lead, containing a drachm of lead to a pint of water.

Abstain from all meats and drinks which tend to heat and inflame the blood; and keep the apartment of a moderate temperature.

## SCURVY.

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### SYMPTOMS.

The Scurvy comes on gradually with lassitude, indisposition to exertion, and loss of strength. As it advances, the countenance assumes a yellow and bloated appearance; the gums swell, are spongy, and bleed on the slightest pressure, and the teeth are loosened; the breath becomes offensive; livid spots appear on the skin, which unite and form blotches; wandering pains are felt in the bones; there is weakness of the joints, stiffness, and swelling of the legs; ulcers break out and discharge a foetid, bloody matter; and the bowels are obstinately costive, or the stools are frequent and offensive. Throughout the course of the disease, the appetite generally remains good and the mind clear.

In a later and more aggravated stage of the disease, emaciation increases; the joints contract, swell, and are painful; the limbs become useless; faintness follows every effort; blood is discharged from different parts of the body; and death approaches slowly, or comes suddenly in the attempt to make exertion.

### CAUSES.

Scurvy arises from the long continued use of salted provisions, especially such as have been long kept, or have become putrescent. It is more readily induced by great fatigue, want of cleanliness, neglect of ventilation, damp, cold air, and indolence.

### TREATMENT.

Whenever a sailor is found to be laboring under the scurvy, whether at sea or on shore, it is indispensably necessary that he abstain from salted provisions; as these, being the cause of the disease, will not fail to continue it.

If it comes on when near land, procure from the shore a large supply of vegetables and ripe fruits, and serve them out with a due mixture of fresh meats; confining the sick to this food; while the rest of the crew should partake largely both of vegetables and fruits to counteract the tendency to scurvy.

If it comes on at sea, discontinue the use of salted provisions,

and confine the sick to such vegetable diet as<sup>\*</sup> may be on board the ship, as bread, potatoes, peas, beans, &c. Let potatoes be scraped and mixed with vinegar and given a pound or more a day to each patient. Mingle the vegetables with vinegar and let them be taken freely. Dissolve four ounces of nitre in a quart of vinegar, and give a table-spoonful three times a day, and wash the blotches and ulcers with the same; and if this be found to set well the quantity of nitre may be doubled, or the former dose may be increased in frequency. In some cases it may be necessary to add sweetened water, but in others it may be taken undiluted.

For the sponginess of the gums wash them with a decoction of bark\* and tincture of myrrh slightly acidulated with elixir vitriol. To remove stiffness of the joints and swelling, bathe with warm vinegar, apply poultices, and rub with flannel; and to alleviate pains use opium.

### PRECAUTIONS.

As the scurvy does not come on suddenly, but gradually, and is to be apprehended mostly in long voyages, the master of a ship, after having been long at sea, should be apprehensive of the danger the crew may be in from this cause, and should order a less proportion of salted meats daily, and a greater proportion of vegetables. He should also serve out to the sailors daily a quantity of such acids, and other articles mentioned below, as he may have on board. Restoration in this disease depends wholly on the diet, and unless this be regarded as soon as symptoms manifest themselves, all future efforts may be useless; for safety consists more in preventing the disease, than in the means of curing it.

Regard must be had at the same time to the causes which may hasten, or aggravate the disease. The crew should be strictly attentive to personal cleanliness, subjected to daily exercise, and protected against a cold, damp atmosphere. The ship should be well ventilated, and the clothing and bedding exposed to the sun and air. The food should be good, and free from the slightest taint or injury. Particular attention should be paid to the purity of the water, mixing a little powdered charcoal with every cask of it, when it has become foul and offensive.

### PREVENTIVES.

The best preventive against the scurvy is the juice of lemons, which may be long preserved in the expressed juice in bottles; but as this may ferment, it is better to preserve it in the form of

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\* See Appendix.

citric acid. No ship should go, even on a short voyage, without a sufficiency of this article in the medicine chest; and in a long voyage it is indispensable, as it is an infallible remedy in the cure and prevention of scurvy. It is of little expense, and of small bulk, is easily prepared, and will keep for a very long period. Citric acid is prepared in this manner; take the fresh expressed juice of lemons, and mix with it a proportion of lime; to this mixture pour a little sulphuric acid, and a white powder will be deposited, which is the juice combined with the lime, and is called citric acid; in this form, the juice of the lemon, will remain good for a great length of time. One scruple renders a pint of water pleasantly acid, but it may be taken with any degree of strength in the same manner as the fresh juice.

Nitre is an excellent preventive, and is used by dissolving four ounces in a quart of vinegar, and taken as under the head of treatment. If there be no vinegar on board, use the citric acid as a substitute, making the water as acid as vinegar.

Vinegar is an important preventive, and a large store of it should be laid in with cream of tartar, tamarinds, cider, and other acids.

The ship's stores should contain as many vegetables as it may be practicable to carry; of these potatoes are the most valuable, as they keep much longer than any other. To these should be added peas, beans, rice, and such other vegetable produce, with fruits, as the port or season may afford.

## DROPSY.

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### VARIETIES.

Dropsy is an unnatural collection of watery fluid, either generally diffused over the whole body, or confined to one of the cavities; and bearing different names according to the part affected. When the water is collected under the skin, whether limited to the limbs, or extended over the whole surface of the body, it is called *Anasarca*, or *General Dropsy*. When confined to the cavities within the chest, abdomen, or scrotum, it takes the name accordingly, as *Dropsy of the chest*; of the *abdomen*; of the *scrotum*. Each variety may be found under its proper head.

### GENERAL DROPSY.

#### SYMPTOMS.

This form of Dropsy most generally comes on gradually with a soft, pale swelling about the feet and ankles, which, for a time, occurs only at night, and disappears in the morning. Pressure with the finger on the part leaves a pit or mark. By degrees the swelling ascends, and extends over the whole system; the face becomes sallow, and the appetite and strength are impaired. A cough ensues with a raising of a thin, light-colored fluid, and there is generally shortness of breath, and thirst. The skin, especially of the legs, becomes greatly distended, and either gives way, or water oozes through the pores.

#### CAUSES.

The most ordinary cause of this disease is debility, brought on by intemperance, want of nourishment, or exposure to a cold, moist atmosphere; or debility, the result of former sickness. It may be caused by a diseased state of some of the internal organs.

#### TREATMENT.

If dropsy arises from intemperance, or any other known cause, it may be palliated, but cannot be removed till the cause

which produces it is removed, as the existence of the evil will continue the disease.

To excite the action of the vessels, take of the emetic draught \* till free vomiting be induced, and the stomach thoroughly unloaded.

Evacuate the bowels by taking ten grains of calomel with twenty of jalap in molasses. The following day, take one scruple of jalap with one drachm of cream of tartar in molasses or gruel, and this is to be repeated every morning to procure three or four movements daily.

Mix a drachm of cream of tartar in syrup, and take every eight hours, and this quantity may be increased or diminished according to its effects upon the bowels, and the strength of the patient.

After this course has been pursued for a few days and free evacuations have been procured daily, mix eight grains of calomel with eight of pulverized squills and two of pulverized opium, and divide the whole into eight parts, and give one part every six hours, continuing it till the gums become tender and the swelling subsides. During this course continue the daily use of cream of tartar.

Blisters to the arms and legs are highly useful, and may be applied unless there be extreme debility. The skin too may be punctured with a lancet, and the fluid pressed out by the application of a bandage to the part, moderately tight. Friction with the palm of the hand, or with a dry cloth two or three times a day is beneficial.

During the first few days, in which the patient has through evacuations from the bowels, his diet should be light, but after ten days or a fortnight, he should be supported by the most nourishing and easily digested food, and two grains of sulphate of quinine should be given night and morning.

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\* See Appendix.

## ACUTE RHEUMATISM.

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### SYMPTOMS.

In Acute Rheumatism there is fever with pain. It commences with chilliness, heat, and thirst, which are soon succeeded by severe pain in the joints, or limbs. The larger joints, as the shoulders, hips, and knees, are most frequently attacked. The slightest motion aggravates the suffering. The pain suddenly leaves one joint and fixes itself in another; and is accompanied, or followed by swelling, redness, and extreme tenderness of the part affected. There is an increase of pain and fever in the night. The skin is moist, and is often covered with a profuse sweat, of a strongly acid smell. The tongue is loaded, and the pulse are full, and frequent.

### CAUSES.

Sudden changes of the weather from hot to cold; exposure to a cold, moist atmosphere; currents of cold air passing over the body when heated; sleeping in damp sheets; and wearing wet apparel, are the ordinary causes of rheumatism.

### TREATMENT.

If the patient be vigorous a pint of blood may be taken very early in the disease, and, in a day or two, bleeding may be again performed if there be no improvement in the symptoms.

Next, administer ten grains of calomel mixed with fifteen of jalap in molasses, and the day following repeat the dose, that the bowels may be thoroughly purged; and during the sickness keep the bowels freely open by the daily use of infusion of senna\* or Epsom salts, or any other laxative.

Give five grains of powdered colchicum in molasses or syrup, morning, noon, and night, and this dose may be increased to eight grains, if it do not cause nausea.

Ten grains of Dover's powder should be given every six hours in any convenient liquid.

Pursue this course of treatment for a week or ten days, and if

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\* See Appendix.

it fails to produce the desired effect, then, mix eight grains of calomel with two of opium and one of tartar emetic, and divide into eight parts, and give one every four hours, till the gums become tender; continuing at this point as long as may be necessary.

If the pain leaves a part and attacks the chest, stomach, or bowels, apply a blister over the part from which it moved.

The diet should be of bread, rice, arrow root, and gruel; avoiding every article of food and drink which has the least tendency to heat and stimulate the system.

## CHRONIC RHEUMATISM.

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### DESCRIPTION.

Chronic Rheumatism has many of the same symptoms as the acute, but differs from it in the absence of fever, and of redness in the part affected. There is weakness and pain of the larger joints and surrounding muscles, increased by motion. The pain sometimes wanders, but generally is not apt to shift its place, frequently remaining for months in the same part. The joints which are the seat of this form of rheumatism are pale, cold, and stiff, and relieved by the application of warmth, which rather aggravates the suffering in the acute form. Chronic rheumatism is very apt to return, and, in some cases, continues for many years. It is occasionally a sequel to the acute; but, in most instances, is a distinct disease. In some cases, the pain is accompanied with a swelling of the joint, in others no swelling is perceptible. In some cases, pain is continually present, in others it is felt only on motion, or on changes in the weather. Rheumatism of long continuance often produces an enlargement of the joints.

### TREATMENT.

As a general direction bleeding is not to be employed, but there may be cases where the patient is of a vigorous constitution, and the pain very severe, when bleeding may be of great advantage. In all cases, the abstraction of blood locally by leeches is highly important.

Every two or three days produce free evacuations by infusion of senna \* with half an ounce of Epsom salts.

Give eight grains of colchicum forenoon, afternoon, and evening, in any convenient vehicle.

Liniments of a warming and stimulating kind, rubbed frequently every day over the part, tend greatly to alleviate the pain; for this purpose, use a mixture containing equal parts of spirits of turpentine, spirits of hartshorn, tincture of camphor, and sweet oil, and keep folds of flannel applied to it.

Spread basilicon ointment upon a piece of cotton cloth of the size of two hands, and sprinkle over it twenty grains of tartar

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\* See Appendix.

emetic, and apply this over the seat of pain; renewing it every morning till an eruption comes on, when the dressing may be omitted, and a warm poultice of bread placed over it; renewing the dressing as soon as the sore heals.

Take fifteen grains of Dover's powder every night.

If this course fail to produce the desired effect, apply a large blister over the seat of pain, renewing the blister for a number of times, as soon as it heals, and keep applied flannels wrung out in hot water.

Thirty grains of powdered guaiacum with half a grain of opium may be taken three times a day in gruel.

The diet should be light; the body warmly clad in flannel; great caution used in guarding against exposure to night air, cold, getting wet, or wearing wet clothing; and the limb should be exercised as much as possible. On sailing from a hot to a cold climate, persons subject to rheumatism should early exchange a thin for a woollen dress, and carefully guard against the effects of cold.

## DIABETES.

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### PECULIAR MARKS.

The term Diabetes is applied where there is a profuse discharge of urine, which, from its long continuance, may be said to be permanent, and which is of a sweetish taste.

An increased flow of urine is not necessarily a disease, as it not unfrequently accompanies nervous disorders, and constitutional derangement. When it is found to be a symptom of a disease, the treatment must be directed to the primary affection, on which it may seem to depend.

### SYMPTOMS.

Diabetes comes on slowly, and generally is not noticed for some time, excepting that there is a voracious appetite and great thirst. The distinguishing symptom of this disease is a frequent discharge of urine, at first clear and insipid, but afterwards of a sweetish taste. The quantity in some cases is very great, and in ordinary cases exceeds a gallon a day. After the disease has continued for some time, it is attended with general debility, emaciation, soreness of the gums, pain and weakness in the back and loins, and swelling of the extremities.

### CAUSES.

It may be caused by the abuse of medicines which act on the urinary organs; by intemperance; long continued disease of the stomach; and exposure to a cold, moist air.

### TREATMENT.

Cleanse the stomach by taking twenty grains of ipeacuanha in warm water, and aid the vomiting by drinking camomile tea.

The most important remedy in diabetes is a strict and long-continued attention to the quantity and quality of the food and drink. The patient's diet should consist only of fresh meats, with a little bread and rice. The quantity should be small, and as the appetite is inordinate there is great danger of eating too much. The quantity of drink also must be small at any one

time, and he must not be allowed to drink as much as he may wish.

Apply a blister to the lower extremity of the back.

To a table-spoonful of the infusion of rhubarb \* of ordinary strength add fifty drops of laudanum, and give three or four times a day.

Keep the body warmly clad, and make daily use of the affusion of cold salt water.

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\* See Appendix.

## DISEASES OF THE SKIN.

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### ITCH.

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#### DESCRIPTION.

This disease is contagious, and may be communicated by touching a person affected with it, or handling clothing impregnated with the matter. The itch appears in little watery pimples between the fingers, on the wrists, and inside the arms. It gradually spreads over the whole body, and is attended with an intolerable itching which is increased by warmth.

#### TREATMENT.

The sulphur ointment is the most speedily efficacious remedy, and should be applied as soon as the disease is discovered. This is made by mixing together equal parts of sulphur and hogs' lard. It should be rubbed over the whole system for three successive nights, after which the person should be well washed with warm water and soap, and clothing used, which is free from the contagious matter. During the application, the person affected should take every night as much sulphur, with a small proportion of cream of tartar, as will keep the bowels loose. The clothes which he may have worn during the disease should be well fumigated with sulphur, and thoroughly washed.

## SCALD-HEAD.

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### DESCRIPTION.

This is a disease affecting the scalp, and continuing in some persons from early life. There are small ulcers at the roots of the hair, which pour out a yellow matter, forming a scab, or covering the surface with scurf; the hair falls off; and the scalp is of a reddened appearance, attended with itching.

### TREATMENT.

Cut the hair close, and wash the head daily with warm water and soap; apply to the scalp the ointment of sulphur and hogs' lard; or tar and sulphur ointment; or the yellow ointment. Wash the part with a solution of one drachm of muriate of mercury, or one drachm of *blue vitriol* in a pint of water.

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In other *diseases of the skin*, as in *Shingles*, *Rash*, all that will be necessary is, to feed on a light and cooling diet, and keep the bowels open with Epsom salts. Some persons, after eating lobsters, or other shell fish, are immediately affected with eruptions on the skin, arising either from peculiarity of constitution, or from the fish not being in a healthy state. In such cases, the emetic draught\* should be taken, till the contents of the stomach are thrown off.

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\* See Appendix.

## DISEASES OF THE HEAD AND NERVOUS SYSTEM.

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### INFLAMMATION OF THE BRAIN.

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#### SYMPTOMS.

This disease is marked by severe pain in the head, with a sense of heat and fulness; the eyes are red and intolerant of light; noise<sup>\*</sup> aggravates the pain; there is wakefulness; wandering of the mind; fierceness of the countenance; delirium; the tongue is furred; and the pulse are full and rapid.

It may be distinguished from madness, and from the delirium of low fevers, by the suddenness of the attack, by the violence of the fever, pain in the head, and redness of the eyes and face.

#### CAUSES.

The causes are, sudden exposure to cold when the system is heated; exposure of the naked head to the rays of a vertical sun; intemperance; long want of sleep; excessive fatigue in hot climates; blows on the head.

#### TREATMENT.

The safety of the patient depends on early and full bleeding. Take a pint and a half of blood, and repeat the operation in three hours, if there be no improvement in the symptoms.

Immediately after the bleeding, give fifteen grains of calomel with thirty grains of jalap in molasses. If this fail to operate in six hours, let it be followed by half an ounce of salts, that the bowels may be thoroughly evacuated; and they are afterwards to be kept open by the daily use of infusion of senna<sup>\*</sup> and salts.

Wrap around the head folds of cotton cloth wrung out in cold water, and change them as often as they become warm; and wash the head every hour with a mixture of one table-spoonful of sulphuric ether with three of cold water.

Apply blisters to the back of the neck and legs, and mustard poultices<sup>†</sup> to the feet.

The diet should be of gruel and rice, and the drink of toast water and elixir vitriol in sweetened water.

The apartment should be cool, as far retired from all noise as possible, and but little light admitted to it.

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<sup>\*</sup> See Appendix.

<sup>†</sup> Ibid.

## APOPLEXY.

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### DESCRIPTION.

Apoplexy is sudden in its attack; the person falls down, and is deprived at once of sense and motion; the face is turgid and florid; the blood vessels about the head and neck are crowded; the eyes are fixed; the breathing is slow and snoring; and the pulse are full and slow.

The attack is sometimes preceded by headache, giddiness, flashes of light before the eyes, and noises in the ears.

It often ends, within a few hours, in death, or is followed by palsy, leaving the mouth drawn on one side, and the speech imperfect.

The persons most liable to it are those rather advanced in life, of short necks, of plethoric habits, and who are addicted to intemperance and gluttony.

In those predisposed, it may be excited by great exertions of body or mind, and by violent passions.

### TREATMENT.

Remove every thing from the neck, expose the patient to a free, cool air, and keep his head raised; immediately take a pint and a half of blood or more, according to the age and strength, and if this is followed by no improvement in two or three hours, he should be again bled freely, as blood-letting is the only effectual remedy in Apoplexy.

Administer twenty grains of calomel with thirty of jalap in molasses, or, if liquids can be more readily taken, give the infusion of senna\* with two ounces of epsom salts, and aid this by clysters of warm salt water.

Apply cloths wet in cold water to the head, blisters to the legs, and mustard poultices† to the feet.

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\* See Appendix.

† Ibid.

## STROKE OF THE SUN.

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In hot climates, persons long exposed to the direct influence of the rays of the sun, particularly if the head be uncovered, are, not unfrequently, suddenly overcome and fall, or are soon after attacked with a violent headache and fever. In some instances, death immediately follows, in others, madness or lethargy. As this is a species of apoplexy it must be treated as such, particularly by blood-letting, bathing the head with sulphuric ether, and applying cloths wet with cold vinegar and water.

## PALSY.

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### DESCRIPTION.

Palsy is often the result of apoplexy, but these, frequently, are separate and distinct diseases attended with symptoms peculiar to each. Before the attack of palsy, there is often a sense of numbness, weakness, and coldness in a limb; but these precursory symptoms are but little regarded, and the attack is sudden. In some cases, there is an immediate loss of motion and sensibility in one half of the body, in others, it may be confined to the limbs. Sometimes, the speech is impaired, the features distorted, and the mind weakened; occasionally, there is only a sudden loss of power in the arm or leg. Palsy may arise from the same causes as apoplexy, and from any cause which tends to destroy the nervous energy.

### TREATMENT.

If the person be young and vigorous, it may be treated in the same manner as apoplexy; but if the disease be attended with constitutional debility, bleeding is not necessary.

Bring on free vomiting by the emetic draught\* and free operation of the bowels, by the use of pill cochliæ, and these may be repeated according to the strength of the patient.

Make a strong infusion of mustard in hot vinegar and wash the part with it, and with a mixture containing equal parts of spirits of hartshorn, turpentine and sweet oil; and use frequent and long-continued rubbing with a coarse cloth.

Apply blisters to the back of the neck, and to the part affected, repeating them as soon as healed.

Give two or three times a day a tea-spoonful each, of the tincture of guaiacum and tincture of camphor in a table-spoonful of water, adding ten drops of spirits of hartshorn to each dose.

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\* See Appendix.

DELIRIUM TREMENS.

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This is what the sailors term the *Horrors*. It is common to those addicted to the use of spirituous liquors to excess, and comes on either after long-continued intemperance, or on a sudden disuse of spirits. The mind is confused and hurried, delirium soon follows with unceasing watchfulness day and night, and trembling of the limbs, particularly, of the hands. This is a nervous affection, and generally may be removed in a short time by opium. Give from three to five grains every two hours till sleep is induced, or till the patient is quieted, and continue the use of opium every night for a few nights, gradually diminishing the quantity.

## EPILEPSY, OR FITS.

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### SYMPTOMS

The person suddenly falls and loses all consciousness; some parts of the body are violently convulsed; there is foaming at the mouth; the jaws are fixed; the breathing is irregular and laborious; sometimes the tongue is thrust out and wounded by the teeth. When the fit has lasted for some time, the convulsions subside, and the person awakes, not knowing what passed during the fit, but complains of drowsiness, languor, and pain in the head. Sometimes there is a warning of its approach, by headache; noise in the ears; dimness of sight; disturbed sleep; dulness, or a sense of cold air ascending from the extremity of a limb towards the head; but more frequently it comes suddenly. The fits vary in violence, duration, and frequency, and may recur every day, or after longer or shorter intervals.

### CAUSES:

These may be injuries of the head; mental excitement; abuse of spirituous liquors; sudden fright. Sometimes it is hereditary.

### TREATMENT.

During the fit, let care be taken that the person do not injure himself, let him be placed on his back, with the head a little raised; his clothing should be loosened, and a soft piece of wood placed between the teeth to guard the tongue from injury.

Nothing more should be attempted during the fit, but in the interval between them, learn, if possible, the cause of the fits, and prescribe accordingly.

If the patient be young and of a full habit, it is advisable to take a pint of blood, and keep the bowels freely open by Epsom salts, at the same time feeding on a light diet, and avoiding stimulating drinks.

If the disease be thought to arise from a disordered stomach, let the emetic draught\* be taken, and free vomiting induced; after which the bowels should be kept open by the use of the pill cochiaë.

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\* See Appendix.

If the patient be of a delicate constitution and of infirm health, give a grain or two of quinine night and morning.

In every case, avoid whatever may be found to be an exciting cause of the disease.

If the fit comes on by a sense of cold air ascending a limb, apply a ligature firmly around it, above the part, for two or three minutes, and it will prevent the fit. No sailor subject to epilepsy can, with safety, ascend the yards.

## TETANUS, OR LOCKED JAW.

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### SYMPTOMS.

The attack is sometimes sudden, but generally it comes on gradually, with a stiffness of the muscles at the back of the neck, and difficulty of swallowing. As the disease advances, there is pressure and pain in the chest; the jaws become rigid; the muscles of the spine and limbs are attacked with painful convulsive motions; pain shoots from the pit of the stomach towards the spine, and the face wears a peculiar expression. The spasms, after continuing for a longer or shorter period, remit, but the interval of ease is short, and they are frequently brought on by the efforts of the patient to speak, swallow, or change his posture. The faculties of the mind are often preserved to the last.

### CAUSES.

This disease occurs most frequently in hot climates, and is caused by exposure to cold, damp night air, and sudden changes in the weather from heat to cold. It is frequently caused by wounds, punctures, or injuries to a part in which a nerve is irritated.

### TREATMENT.

In every stage and form of locked jaw opium is the remedy on which we are to place our chief, and almost only dependence.

Give one hundred drops of laudanum every half hour, and increase the dose till the disease may be affected by it. If the jaws be locked, so that no medicine can be taken by the mouth, give one hundred and fifty drops every half hour in a clyster of warm fresh water.

Administer twenty grains of calomel with twenty of jalap in gruel, and in four hours give a table-spoonful of spirits of turpentine with the same quantity of castor oil, and continue to give the turpentine and oil every three hours till the bowels are freely opened.

Endeavour to bring on intoxication by drinking of brandy,

spirit, or wine, and keep the patient in this state till the disease subsides.

If locked jaw arises from a wound, open the part with a sharp instrument, and pour into it warm spirits of turpentine; or, after lacerating the part with a lancet, apply over it a blister.

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## HEAD-ACHE.

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### TREATMENT.

Head-ache is generally a symptom of derangement in some part of the system, but it may arise from other causes. The treatment must be governed by the cause.

If it arises from overfulness of the blood vessels of the head, blood should be taken, and the bowels freely opened by any mild medicine, continuing the daily use of it till the head be relieved.

If attended with nausea, coated tongue, and other symptoms of a foul stomach, take of the emetic draught\* till free vomiting be induced.

When it is caused by long-continued costiveness, correct this state of the bowels by taking every night of the pill *cochiæ*.

When it arises from rheumatism, bathe the feet in warm water, and apply blisters to the legs.

If caused by great heat, or violent exercise, take Epsom salts.

In long-continued and severe head-ache from any cause, apply blisters to the back of the neck and behind the ears, and wash the head with cold vinegar and water, or sulphuric ether.

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\* See Appendix.

## DISEASES OF THE NOSE, EYES, AND EARS.

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### BLEEDING FROM THE NOSE.

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#### CAUSES.

This disease is often produced by exposure of the head to the sun, or heating the system by violent exercise. In persons subject to this complaint, slight causes reproduce it.

#### TREATMENT.

In those of a full and plethoric habit, bleeding from the nose should not be immediately stopped, at it is, occasionally, rather a salutary evacuation, and need not be regarded unless it be of frequent occurrence, or of long continuance, or the quantity lost be great.

The person should sit in an erect posture, and have applied to the whole head cloths dipped in cold vinegar and water, and the same cold liquids should be applied to the back and genitals.

In most cases this alone will stop the bleeding, but if it fails, then dissolve one drachm of blue vitriol and one of alum in half a pint of water. Tents of lint steeped in this are to be introduced into the nose by means of a quill. Powdered charcoal introduced in the same manner has often a happy effect. In some cases it may be necessary to have recourse to blood-letting.

After bleeding from the nose has ceased, care should be taken not to remove the tents or clotted blood, but to let them remain till they fall out. The bowels should be kept freely open for some time by salts, or pill cochiaë, and all circumstances, which are found to reproduce the complaint, should be avoided.

## CATARRH.

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### DESCRIPTION.

Catarrh, or Cold, is marked by a sense of fulness in the head, and weight over the eyes. At first, the nostrils are crowded and dry, but soon discharge a thin acrid fluid, and feel tender and heated. The neighbouring organs are affected; there is pain in the head and throat; inflamed and watery eyes; hoarseness; cough; and soreness of the chest. There is a variety of this disease termed *Influenza*. Atmospheric changes are the cause of catarrh.

### TREATMENT.

Persons laboring under a catarrh, or cold, should keep confined to their apartment, avoid, as much as possible, all changes of temperature, and feed on a light, cooling diet.

At night put the feet and legs into warm water, and drink freely of flaxseed tea, or other teas.

A copious draught of cold water, taken immediately before going to bed, will often bring on perspiration, and cure a cold.

When the complaint is confined principally to the nose, hold the head over the steam of hot vinegar and water. If the whole head be affected, open the bowels with the infusion of senna\* and half an ounce of salts, and apply a blister to the back of the neck.

If there be soreness of the throat, bathe with an infusion of mustard in hot vinegar, and wrap flannel around the neck.

If there be pain in the chest with cough, put a blister on the chest, take freely of a solution of gum Arabic in warm water, and other mucilaginous teas; a tea-spoonful of syrup of squills every three hours, and a tea-spoonful every hour of a solution of eight grains of tartar emetic in half a pint of hot water.

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\* See Appendix.

## POLYPUS OF THE NOSE.

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### DESCRIPTION.

A Polypus is a tumor in the cavity of the nose. It varies in size and color, and generally is free from pain until it has attained a considerable size, when by pressure on the surrounding parts, it may become fatal. The state of the atmosphere sometimes affects a polypus, as it is contracted in dry weather, and enlarged in a moist state of the air.

### TREATMENT.

As soon as such a tumor is suspected, astringent injections should be applied to it to prevent its growth. Frequently inject into the nose a solution of one drachm of white vitriol and two of alum in half a pint of water, or a strong decoction of oak bark.\* If the polypus continues to grow, it must be extirpated by a surgeon.

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\* See Appendix.

## INFLAMMATION OF THE EYE.

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### DESCRIPTION.

The eye is subject to a variety of diseases, arising chiefly from inflammation, which may be of the eye ball, or of the lids. Inflammation of the eye ball is acute and severely painful; but that of the eye lid may be chronic, and is of less consequence. There is a sense of heat and pricking pain in the eyes, and inability to endure the light; the eye lids are swollen; there is redness of the eyes; a flowing of hot tears, and a feeling as if some foreign substance was irritating the eye. In severe cases, pain in the head follows, with a quick and full pulse. The disease may be occasioned by substances getting into the eye, by excess of light; or by sudden changes in the atmosphere.

### TREATMENT.

The patient must retire to a cool, dark apartment, and, during his confinement, avoid the use of bandages around the head, as they heat the eyes, and aggravate the complaint.

If the disease be severe it is necessary to bleed; but local bleeding by leeches is preferable, and should never be omitted, if they can be obtained. Apply half a dozen around each eye, and repeat the application, every second or third day, till the pain and inflammation subside. This is the best mode of abstracting blood in inflammation of the eyes, but, if leeches cannot be obtained, take a pint of blood from the arm.

Give ten grains of calomel in molasses, and three hours after an ounce of Epsom salts in a tumbler of water. Every third day, give five grains of calomel followed in the same manner by salts, and, on the intermediate days, keep the bowels freely open by the infusion of senna\* and salts.

Place blisters on the back of the neck, behind the ears, or to the temples, and continue to reapply them as soon as healed, till the disease is removed. A poultice of alum eurd,† applied to inflamed eyes is very beneficial.

Keep applied to the eyes a little lint or linen dipped in the fol-

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\* See Appendix.

† Ibid.

lowing lotion; to half a pint of warm water add sixteen grains of sugar of lead, eight grains of sulphate of zinc, and two teaspoonfuls of laudanum. Use the liquid cold or warm, as on trial may be found to agree best.

At any period of the disease, if the tongue be loaded, and symptoms of fever attend, take of the emetic draught\* till free vomiting is induced.

The patient should feed only on rice, bread, and gruel, and abstain from all heating and stimulating drinks.

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A *Stye* is a small inflammatory tumor on the eyelid. An early application of sugar of lead in solution, two grains to an ounce of water, will sometimes prevent the forming of matter, but when this fails, cover the stye and eyelid with a soft, warm poultice of bread, and renew it often.

Sometimes the eyelids are glued together in the morning by a thick matter. To prevent this, anoint the edges of the eyelids with spermaceti, or with an ointment made of thirty grains of sulphate of zinc to an ounce of lard.

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\* See Appendix.

## INFLAMMATION OF THE EAR.

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### TREATMENT.

Ear-ache generally proceeds from inflammation, brought on by partial exposure to cold.

Apply to the ear flannels wrung out in hot water, and drop into the ear warm sweet oil, warm laudanum, and sulphuric ether. Place a blister behind the ear, and poultices of boiled onions over it.

If the pain and throbbing increase, an abscess will form, which must be promoted by the application of warm poultices of bread or flaxseed.

After the abscess breaks, syringe the ear frequently every day with warm water and soap, adding a little tincture of myrrh, till it is healed.

If the pain be caused by an insect getting into the ear, fill it with tincture of camphor, or spirits of turpentine.

## DEAFNESS.

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### TREATMENT.

Deafness may arise from several causes, and, in many instances, cannot be remedied.

If it proceeds from a cold, keep the head warm, apply flannels dipped in hot spirit, and place a blister behind the ear.

If it arises from hardened wax, syringe the ear with warm water and soap, pour into the ear warm sweet oil, and remove the wax with a probe.

If it proceeds from a want of moisture within the ear, excite the part by dropping into it a liniment of equal parts of spirits of hartshorn and sweet oil, and keep the ear closed with cotton moistened with spirits of turpentine.

When deafness comes on gradually, rather from weakness in the organ, introduce into the bottom of the ear cotton dipped in sulphuric ether.

## DISEASES OF THE MOUTH AND THROAT.

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### APHTHA.

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#### DESCRIPTION.

Adults are occasionally troubled with Aphtha, or sore mouth, consisting of small white pimples, or specks, at the angles of the lips, on the edges of the tongue, or inside the cheeks, attended with a sense of heat, and painful tenderness; sometimes they extend along the throat and bowels, and diarrhoea ensues.

#### TREATMENT.

Correct the bowels by five grains of calomel with five of powdered rhubarb in molasses, followed in three hours by a table-spoonful of castor oil; and this may be repeated every fourth day.

Keep the bowels open by the daily use of rhubarb and magnesia.

Mix equal parts of powdered borax and loaf sugar, and sprinkle frequently on the tongue.

Dissolve three drachms of borax in half a pint of water and add sugar or honey, and hold in the mouth as a gargle; or the decoction of bark.\*

The diet should be fresh meat with a small proportion of vegetables.

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### SPONGY GUMS.

When the gums are spongy and bleed, use frequently as a lotion, a tea-spoonful each of the tincture of myrrh and tincture of bark, in a wine-glass full of water.

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\* See Appendix.

## TOOTH-ACHE.

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### TREATMENT.

To remove or palliate the pain, which arises from a decayed tooth, introduce into the cavity the oil of cloves, or laudanum on cotton ; or a piece of opium ; and drop into the ear of the affected side laudanum or brandy. Extraction is the only effectual remedy.

When it is produced by cold affecting the nerves of the teeth, and is attended with swelling of the face, apply poultices of bread and vinegar to the part, bathe with warm spirit and vinegar, and place a blister behind the ear.

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## MUMPS.

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### DESCRIPTION.

This is a swelling of the glands of the neck, on one or both sides, extending over the cheek and neck, attended with stiffness of the jaw, and difficulty of swallowing. It begins to subside after the fourth day, and as it passes off is, occasionally, followed by swelling of the testicles.

### TREATMENT.

Generally it will be sufficient to keep the face and neck warm with flannel, to open the bowels with salts, to rest, and avoid exposure to cold air.

If the testicles be affected, apply flannel dipped in a solution of sal ammoniac, an ounce to a pint, or in a solution of sugar of lead, two drachms to a pint. If they are very painful, or if the head is much affected, bleed, and take ten grains of calomel with twenty of jalap.

## INFLAMMATORY SORE THROAT, OR QUINSY.

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### SYMPTOMS.

In Quinsy there is redness, heat, and swelling in the throat. As the disease advances, pain and difficulty of swallowing increase, with dryness of the throat; pains around the neck; inability to articulate; a secretion of ropy saliva; and slight fever. Sometimes an abscess forms in the throat and breaks.

### CAUSES.

Currents of cold air passing over the neck when heated; sudden changes of weather, or getting wet, are the usual causes of this disease.

### TREATMENT.

Open the bowels with an ounce of Epsom salts in a tumbler full of water, and occasionally repeat the dose.

Bathe every four hours with equal parts of spirits of hartshorn and sweet oil and wear flannel around the throat. Apply a mustard poultice to the neck and blisters behind the ears.

Inhale frequently the steam of hot vinegar and water.

In the commencement of the complaint, dissolve a scruple of nitre in a little water and gargle the throat, or place a small portion on the back of the tongue, and let it dissolve slowly.

If the swelling increase, and a tumour be forming in the throat, apply every hour warm poultices of bread and water, till the abscess breaks.

The diet must consist of arrow root and gruel, avoiding heating drinks.

After recovery, there is a susceptibility in the part to be again more readily affected, and in such persons, caution is particularly necessary, to guard against a repetition of the complaint.

## ULCERATED SORE THROAT.

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### DESCRIPTION.

This is a contagious disease, communicating itself from one person to another. It comes on with chilliness and heat; stiffness and soreness of the throat; a small, weak pulse, and great prostration of strength. On examination, the throat is found to be of a crimson redness, with small whitish specks scattered over its surface; these soon ulcerate, become black, and spread over the whole of the throat, tongue, and cheeks; there is nausea, and often a vomiting and purging; and the breath is very offensive. After the disease has progressed four or five days, it is frequently attended by a scarlet eruption on the neck, breast, and arms.

It may be distinguished from quinsy by the vomiting and diarrhœa; by the ulcers; and the extreme debility.

### TREATMENT.

Vomiting may be resorted to in every case, and may be frequently repeated in the early part of the disease. Cleanse the stomach by taking thirty grains of ipecacuanha, in a little warm water and aid the vomiting by drinking camomile tea.

After this, the bowels should be evacuated by any gentle laxative, as five grains of calomel in a table-spoonful of castor oil; or an infusion of senna \* with salts.

Bathe the neck every ten minutes with cold water, and use it as a gargle, as cold water, externally and internally, gives more relief than any other application.

Gargle the throat with a decoction of bark † made acid by the addition of a few drops of muriatic or sulphuric acid; also use as a gargle vinegar saturated with salt, and mingled with cold water.

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\* See Appendix.

† Ibid.

Bathe with a mixture of equal parts of spirits of hartshorn, sweet oil, and spirits of turpentine, and apply a blister around the neck.

Take a drachm of powdered bark every two hours in a glass of wine; or half an ounce of the tincture of bark every three hours. If putrid symptoms ensue, and the patient be sinking, give bark and wine in as large quantities as the stomach can bear.

From the commencement of the attack, the strictest attention should be paid to cleanliness, pure air, and free ventilation; and as the disease is readily communicated, the patient's apartment should be daily fumigated, as directed under the head of putrid fever.

## CROUP.

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### SYMPTOMS.

Croup commences with drowsiness, hoarseness, and dry cough. The cough increases in the evening and diminishes in the morning; and is attended with a shrill, hissing noise, as if the air was drawn through a narrow passage. Sometimes a small portion of white phlegm, or small whitish films are thrown off by coughing. There is great labor of breathing, heaving of the chest, and, occasionally, the patient is almost suffocated.

Croup may be distinguished from quinsy, and ulcerated sore throat, by the peculiar sound made in inspiration.

Adults are rarely affected with this disease, but the instance occasionally occurs.

### TREATMENT.

Inflame the neck by rubbing it with flannel wet with spirits of turpentine, or an infusion of mustard in hot vinegar; and keep up this external inflammation by repeating the application at short intervals, till the part be nearly blistered.

Give the emetic draught\* adding to each table-spoonful, a tea-spoonful of the syrup of squills, to ensure a speedy and active vomiting.

Give five grains of calomel in molasses every two hours till the bowels are thoroughly purged.

Continue small doses of the emetic draught with syrup of squills every hour, to keep up a nausea.

If this treatment fail to remove the disease, draw blood from the arm according to the age and strength of the patient, and apply a blister around the neck.

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\* See Appendix.

## DISEASES OF THE CHEST AND AIR PASSAGES.

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### COUGH.

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#### IMPORTANCE.

A Cough is generally produced by a cold, and may be easily removed if early attended to. Coughs, though regarded in the commencement as of little importance, often lead to serious results. Where the constitution is originally delicate, or where the lungs have become weak from preceding disease, a cough, which at first might have been readily removed, becomes, by neglect, seated and irremediable.

Exposed as the sailor is to frequent changes of climate, and to every vicissitude of weather, it is the more important to make timely application of medicine; as these exposures serve to aggravate the complaint, and to increase the danger.

#### TREATMENT.

If the cough be violent, and is attended with pain in the head or chest, a pint of blood should be drawn; where the strength and age of the patient will admit of it, but under other circumstances, bleeding is not necessary.

If there be oppression at the chest, a sense of weight, and labor of breathing, apply a large blister over the part affected, and repeat it till these symptoms are removed.

Keep the bowels freely open with Epsom salts, cream of tartar, or infusion of senna.\*

Dissolve a table-spoonful of flaxseed in a pint of warm water, and take a table-spoonful every hour, adding a tea-spoonful of the syrup of squills every three hours.

When the lungs are loaded with a tough mucus and expectoration is difficult, dissolve eight grains of tartar emetic in half

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\* See Appendix.

a pint of hot water, and take a tea-spoonful every hour, gradually increasing the dose unless it produces nausea or purging. Mix two parts of syrup of squills with one part of antimonial wine, and take a tea-spoonful every two hours. In such cases emetics have a happy effect, and may be taken at any stage of the complaint.

To promote sleep and to allay cough, a tea-spoonful of paregoric with one of the mixture of squills and antimony may be taken at night.

Place a plaster of Burgundy pitch between the shoulders, and renew it after a few days.

After the cough has subsided, if there remains a soreness of the chest, take forty drops of balsam copaiva every night and morning on brown sugar.

During the continuance of the complaint, it is highly important to keep in a uniform moderate temperature, to be warmly clad, and to avoid stimulating food and drink.

## SPITTING OF BLOOD.

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### SYMPTOMS.

If blood comes from the lungs, it will, in most instances, be thrown up by coughing, and will be preceded by flushed cheeks, difficulty of breathing, pain in the chest, and a sense of tickling in the throat. The blood is of a florid hue, and the bleeding is sudden, and often copious. Sometimes the flow of blood is much slower; the quantity smaller and is rather hawked up intermixed with spittle. A frothy expectoration ensues, with a little increase of pulse, and a feeling of heat, and some degree of pain in the breast.

### CAUSES.

Spitting of blood may arise from fulness or weakness of the blood vessels of the lungs. It may be occasioned by intemperance; by sudden and violent exertion, as running, blowing wind instruments, or loud speaking.

When the constitution is strong, and there is no predisposition to affection of the lungs, spitting of blood is not particularly dangerous; but, in persons of a slender habit, and of feeble health, it is often the precursor of consumption.

### TREATMENT.

The spitting of blood may be arrested by taking a table-spoonful of common salt either alone, or dissolved in a little water.

In a strong constitution blood letting is indispensable, as the bleeding, in such cases, arises from an over fulness of the vessels; and this should be repeated if the pulse continue full and hard. But, if the patient be of a lax fibre, and of a consumptive habit, blood letting would be injurious, except there be much oppression at the chest, or great labor of breathing.

Mix eight grains of sugar of lead with one grain of pulverized opium, and divide the mass into four parts, giving one part every three hours, and continue the use of this medicine for a few days, gradually lessening in frequency.

Take frequently a wine glass full of cold water sweetened with twenty drops of elixir vitriol.

Apply a large blister to the chest, and repeat it as soon as the part is partially healed.

Keep the bowels open with any mild laxative, as Epsom salts or castor oil.

After this course has been pursued for a few days, take, every four hours, twenty drops of the tincture of muriate of iron in a wine glass full of cold water sweetened, to which ten drops of laudanum may be occasionally added, if there be much cough or pain in the chest.

The diet should be light and cooling.

The patient should be forbidden all conversation ; he should carefully avoid a heated atmosphere, all active exercise, and all causes of excitement, mental and physical.

## CONSUMPTION.

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### SYMPTOMS.

When consumption arises from tubercles in the lungs, it begins with a short, dry cough, which becomes habitual; but nothing is spit up for some time except frothy mucus. The breathing is somewhat impeded and hurried on the least motion; there is straitness with oppression at the chest; the body becomes gradually leaner, and languor and dejection of spirits follow. The person may remain some time in this state, while the cough becomes a little more troublesome at night, and the quantity raised in the morning rather increases. If the matter raised be mucus it swims when mixed with water, but if pus, it sinks. By degrees, this matter becomes more thick and dark, and assumes a greenish color; sometimes it is mingled with blood. The breathing, at length, becomes more difficult, and the emaciation and weakness increase. Pain is occasionally felt in the chest, particularly on coughing. There is difficulty of lying on one side or the other, as it increases the cough, or pain, or difficulty of breathing.

The pulse at the commencement of the disease is often natural, but when these symptoms have continued for any length of time, it becomes full, hard, and frequent. The face flushes, and there is a burning heat in the palms of the hands, and the soles of the feet. This fever, which is the hectic, increases generally twice during the twenty-four hours; but the evening increase is much the most considerable, and terminates in a sweat. In the forepart of the day the person complains of chilliness, wants an increase of clothing and feels cold along his back. These feelings gradually leave him, and are followed before midnight by excess of heat terminating in a profuse and exhausting sweat. During the febrile excitement there is a florid redness of the cheeks, but at other times the face is pale.

In the last stage of the disease the patient suffers from night sweats, diarrhœa, and universal exhaustion; the cough and emaciation increase; expectoration is copious and purulent; there are sores in the mouth and throat, and swelling of the feet and legs; but the senses are retained with the fullest persuasion of recovery.

## CAUSES.

In some constitutions consumption is a hereditary disease ; parents and children in succession falling victims to it. In others, it arises rather from the formation of the body, as, flat, narrow chest, long neck. In others, it is the consequence of other diseases, as, inflammation of the lungs, spitting of blood, measles, venereal disease, scrofula ; these diseases having a peculiar tendency to excite it. But the most common and active of all causes of consumption is, frequent and sudden changes of temperature.

## TREATMENT.

It is only in the commencement of the disease, and before ulceration has taken place, that medicine can be taken with the hope of success.

In persons of formerly healthy constitutions, where symptoms of consumption have suddenly come on from accidental causes, and in other constitutions less robust, if there be fixed pain in the side and urgent cough, difficulty of breathing and hard pulse, blood must be drawn from the arm, according to the severity of the symptoms, and the age and strength of the patient.

Apply a large blister to the chest, and keep up a continued soreness and discharge by repeating it as soon as the part is slightly healed.

In some instances, the application of tartar-emetic ointment \* to the chest is more beneficial than blisters, and may be used after a repetition of these. Spread the ointment on a soft piece of leather of the size of both hands, and apply to the chest, renewing the dressing night and morning till an eruption comes on, when the dressing may be discontinued, and renewed as the eruption subsides.

To promote expectoration, and allay the cough, take, according to the urgency of the symptoms, a mixture of twenty drops of paregoric with ten of antimonial wine ; or a tea-spoonful of syrup of squills with ten drops of laudanum, in a table-spoonful of liquorice tea or mucilage of gum Arabic.

Avoid irritating the bowels by active cathartics as these debilitate the patient, and are particularly injurious in consumption ; but costiveness should be removed by moderate doses of any mild laxative.

The food should be of the lightest kind, nutritious but not stimulant. Milk with farinaceous preparations is preferable to all other articles of diet.

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\* See Appendix.

The patient should wear flannel next the skin, guard against changes of atmosphere, and keep in a uniform temperature.

Exercise in the open air is of great importance, and is much more beneficial than exercise in close apartments.

In the incipient stage of consumption, a person may derive benefit by a change of residence to a warm climate ; but change of climate cannot prove remedial, where ulceration has taken place.

In the last stages of the disease, all that can be done is to support the person by nourishing food and drink, and to lessen his sufferings by opium.

Other medicines more powerful are sometimes made use of in consumption ; but is not safe to employ them, except when prescribed by a physician, who may have examined the case ; and are therefore omitted.

## ASTHMA.

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### SYMPTOMS.<sup>f</sup>

An attack of Asthma is generally preceded by uneasiness about the chest, and disturbed sensation of the stomach. It most commonly occurs in the early part of the night. The patient suddenly wakes with great distress in the chest, and difficulty of breathing. He is obliged to rise from bed and seek fresh air. The breathing increases in difficulty and is performed with a wheezing noise, and he gasps for breath as though life was almost extinct. The paroxysm continues till towards morning when it gradually subsides.

There is often a slight vomiting, or cough with raising of a thick mucus, which affords relief according to the quantity thrown off. The attack is followed by uneasy sensations of the chest during the subsequent day, and often returns for a few successive nights, gradually becoming more mild till it leaves the patient, and he enjoys undisturbed rest.

An attack of asthma, though alarming at the time, is not a disease of danger; but it subjects the constitution to returns more or less frequent during after life.

### CAUSES.

In persons predisposed, asthma is often excited by changes in the atmosphere; inhaling air loaded with irritating substances; violent exercise; and by a deranged state of the digestive organs.

### TREATMENT.

In the commencement of the disease, and before the constitution has become habituated to frequent returns of asthma, the abstraction of blood will afford marked relief in young and plethoric persons, but, in the aged and the feeble, it is not admissible.

An attack of asthma may often be prevented when anticipated, and its course shortened when present, by a gentle emetic. Take twenty grains of ipecacuanha with a tea-spoonful of the vinegar of squills in warm water. Tartar

emetic is not to be given in asthma, as violent vomiting is injurious.

Take a grain of ipecaeuanha with a grain of pulverized squills in molasses every four hours.

Keep the bowels gently open, but not relaxed.

The diet should be light and easy of digestion, and spirituous and fermented liquors should be avoided.

The tincture of digitalis, tincture of lobelia, and other medicines are occasionally prescribed in asthma, but they cannot be taken with safety unless directed by a physician in attendance.

## INFLAMMATION OF THE LUNGS.

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### DIFFERENT NAMES.

When the membrane covering the lungs and lining the chest is inflamed, it is called *Pleurisy*; and when the substance of the lungs is inflamed, it is called *Lung Fever*. Sometimes one part is affected and not the other, but generally the disease extends to both. As the treatment of both is nearly similar, they will be classed under the head of *Inflammation of the Lungs*.

### SYMPTOMS.

This disease comes on with chills, heat, and thirst, followed by acute pain in the side or breast, which occasionally extends to the back or shoulder. The pain is greatly increased on making a full inspiration, and by lying on the side affected. The breathing is quick, and particularly difficult when in a recumbent posture. A cough attends, which aggravates the pain, and at first is dry, but after a few days, expectoration ensues, and the matter raised is often streaked with blood. The pulse are hard, full, and frequent, and the tongue is coated.

### CAUSES.

Exposure to cold and moisture is the most common cause.

### TREATMENT.

The first and most important remedy is blood letting. Take a quantity of blood proportioned to the strength of the patient, and the violence of the symptoms. Some immediate impression should be made by the flow of blood, as faintness, or a diminution of pain. The bleeding must be repeated in a few hours, if the breathing continues difficult, the pain sharp, or the pulse hard.

Place a large blister over the pained part, and repeat it as

soon as healed, keeping up a discharge as long as the pain continues.

Take an ounce of castor oil or salts to open the bowels, but not to induce a relaxed state.

To promote expectoration, dissolve eight grains of tartar emetic in half a pint of hot water, and take a tea-spoonful every half hour or hour.

After the pain has in some degree subsided, a tea-spoonful of the syrup of squills may be taken every three hours.

Inhale the steam of hot vinegar and water. Apply mustard poultices \* to the feet.

When free expectoration has taken place, if the cough be frequent and distressing, take a tea-spoonful of paracoric occasionally with the syrup of squills.

The patient should drink freely of flaxseed tea, solution of gum Arabic, or barley water. His food should consist of rice, arrow root, gruel and toast water.

When the inflammatory symptoms have subsided, and the expectoration is copious, a more nutritious diet, and a little wine with water may be permitted.

Cautiously guard the patient against exposure to currents of cold air, and keep his apartment of an agreeable warmth.

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\* See Appendix.

## DROPSY OF THE CHEST.

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### SYMPTOMS.

The approach of this disease is slow and insidious. It commences with a sense of weight and oppression at the breast-bone. A difficulty of breathing is first noticed on much bodily exertion, particularly on ascending a hill, or flight of steps. At length, the breathing becomes more difficult, is increased in a recumbent position, and the patient is suddenly roused from sleep by a sense of suffocation. There is swelling of the feet and legs, dry cough, and irregularity of the pulse.

### TREATMENT.

The course of treatment is the same as that directed under head of *General Dropsy*.

## DISEASES OF THE STOMACH.

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### SEA-SICKNESS.

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#### REMARKS.

Little can be recommended to any good purpose, either to prevent Sea-sickness, or to shorten its course. Some persons, from peculiarity of constitution, suffer excessively during a voyage from long-continued sea-sickness. In some instances, it is attended with acute pain in the stomach and vomiting of blood. Aged persons and infants are rarely affected. In most cases, it passes off in two or three days, and returns only when the sea is unusually rough.

#### TREATMENT.

When sea-sickness is severe, thirty drops of laudanum may be frequently taken, and the dose may be doubled if necessary. A tea-spoonful of ether in a glassful of water may tend to remove pain in the stomach and head.

The person should keep as long as possible on deck, as sea-sickness is less likely to occur in the open air, than in the confined atmosphere of a ship. When compelled to go below, he should take a horizontal position, with the eyes shut, and the mind abstracted from present circumstances. His berth should be near the centre of the vessel, as there the motion is less felt; keeping himself firmly fixed, so as to have the least motion possible.

But little liquid should be taken, and the meat should be high-seasoned, and small in quantity at any one time.

If there be nausea and head-ache without vomiting, drink freely of warm water till the stomach be unloaded, and relief will follow.

On arrival in port, if the powers of the stomach are weakened by sea-sickness, brandy largely diluted with water; wine, and a grain of quinine night and morning, may be taken to remove the debility.

## VOMITING.

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### CAUSES.

Vomiting may arise from a deranged secretion in the organ itself, or may be symptomatic of disease or derangement in some other part of the body. Errors of diet, in quantity or quality, are the most frequent cause of nausea and vomiting.

### TREATMENT.

Where it is occasioned by *improper food*, the only remedy is to abstain from such indulgences. If it arise from a *foul stomach*, take twenty grains of ipecacuanha in warm water; or from the presence of acid, take a tea-spoonful of the carbonate of magnesia two or three times a day; or from *biliary derangement*, take ten grains of calomel with fifteen of jalap made into pills; or from *debility of the stomach*, take a table-spoonful of the infusion of bark\* with ten drops of clxivir vitriol three times a day; or from *spasms in the stomach*, take thirty drops of laudanum, a tea-spoonful of sulphuric ether in a little water, or the saline mixture,† and apply a blister over the seat of pain.

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\* See Appendix.

† Ibid.

## INFLAMMATION OF THE STOMACH.

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### SYMPTOMS.

This disease is known by a burning pain in the stomach, with great soreness, restlessness, and debility; attended with severe vomiting; excessive thirst; frequent and hard pulse; difficulty of breathing; faintness; hiccoughs; and cold sweats.

It is readily distinguished by the heat and pain in the stomach; by the increase of pain when any thing is swallowed, with the immediate rejection of it; and by the sudden loss of strength.

### TREATMENT.

Bleeding is the all-important remedy, and should be employed early and freely. The operation must be repeated after a few hours, if the symptoms do not yield to the first bleeding.

If they can be obtained, leeches should be applied over the stomach. Immediately, apply a large blister over the part affected. Bathe the feet and legs in warm salt water; and apply to the region of the stomach flannel cloths wrung out in warm water, or immerse the patient in a hot bath.

Clysters of warm salt water should be frequently administered, and if the bowels are costive, add a little castor oil.

No liquids should be given except those of a mucilaginous nature, as solution of gum Arabic, flaxseed tea, arrow root, or rice water; and these should be warm and in small quantities.

After the vomiting has a little abated, a table-spoonful of castor oil may be given.

If poisons be the cause of the disease, and are retained on the stomach, an emetic should be immediately taken, consisting of twenty grains of white vitriol with thirty grains of ipecacuanha in a little warm liquid; and this may be repeated every five minutes till free vomiting ensues.

## VOMITING OF BLOOD.

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### SYMPTOMS.

In vomiting of blood there is no difficulty in determining the source of the bleeding, nor of distinguishing it from bleeding from the lungs; as the blood is thrown up by the act of vomiting, preceded by a sense of weight or pain in the region of the stomach, and is unaccompanied by cough. The blood is discharged in a considerable quantity, is of a dark color, and is usually mixed with the contents of the stomach.

### CAUSES.

It may be occasioned by whatever wounds or stimulates the stomach; by sudden and violent efforts; blows over the organ; and obstruction in the liver.

### TREATMENT.

When the disease is caused by external violence, blood should be drawn from the arm.

In moderate attacks, it may be sufficient to take fifteen drops of elixir vitriol in a wine-glassful of cold water, to which ten or twenty drops of laudanum may be added; and this should be frequently repeated, adding or omitting the laudanum, according to the severity of the pain.

If this should fail to check the bleeding, take ten grains of powdered alum with one grain of opium; or use the medicines directed under the head of Spitting of Blood.

Take, every three hours, twenty drops of the tincture of muriate of iron in a wine-glassful of cold water sweetened; and this should be continued for a few days, at longer intervals, after the bleeding has ceased.

During the use of these medicines, move the bowels with castor oil or Epsom salts; or, if rejected by the stomach, use, daily, clysters of warm salt water.

Until the disease is subdued, the diet should consist only of farinaceous substances in a liquid form, given cool, and in small quantities.

## DYSPEPSIA, OR INDIGESTION.

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### SYMPTOMS.

The symptoms of Dyspepsia, which may be referred to the stomach itself, are nausea; a sense of oppression, fulness, and distension of the stomach after eating; flatulence; pain; sensation of sinking or trembling at the stomach; acid or offensive eructations; and loss of appetite. Other symptoms, arising from sympathy of remote parts, are costiveness; vertigo; headache; turbid urine; coated tongue; sallow countenance; disturbed sleep; debility; and depression of spirits.

### CAUSES.

The most common causes of dyspepsia are, errors in diet, either in the quantity or quality of the food; the excessive use of tea, coffee, and tobacco; intemperance; want of air and exercise; profuse evacuations; grief; and derangement in the liver.

### TREATMENT.

It is first indispensably necessary, that the patient should abandon such habits as caused the disease, or tend to continue it; as without this, medicine can do no good.

Cleanse the stomach by taking thirty grains of ipecacuanha in a little warm water, and aid the vomiting by drinking camomile tea. This may be repeated once or twice, after an interval of five or six days. Emetics of a powerful kind should not be taken, nor should those more mild be frequently repeated, as the tendency, in both cases, is to increase the disease.

Take five grains of calomel with ten of powdered rhubarb in molasses, followed three hours after, if need be, by a tablespoonful of castor oil. The bowels may be occasionally excited by calomel with rhubarb in this form, according to the urgency of the case; but on intermediate days, take the infusion of senna \* with salts, or pill cochiae every night, sufficient to keep the bowels open once daily.

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\* See Appendix.

After this course has mitigated the severity of the symptoms, the powers of the stomach may be strengthened by some mild tonic, as quassia ; to two drachms of quassia pour a pint of cold water, and after steeping twelve hours, take a table-spoonful three times a day. Or take two tea-spoonfuls of the compound tincture of bark, three times a day in water.

The diet should be of fresh animal food, with a small quantity of vegetables ; such only being used as have been found by experience to agree best with the stomach. Ripe fruits may be indulged in. But little liquid should be taken at one time ; and no food late in the evening.

The patient should take exercise in the open air, and when in port, ride on horseback, or in a carriage ; but walking is of all exercises the best. He should rub over the stomach and bowels every morning with a coarse cloth, and keep warmly clad.

## HEART-BURN AND SOUR STOMACH.

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### CAUSES.

Sour eructations, attended with a sense of heat and pain in the stomach, arise from a morbid state of that organ, and are often symptoms of dyspepsia.

### TREATMENT.

Take a tea-spoonful of powdered charcoal, in a little water, one hour after a meal. The same quantity of the carbonate of soda may be taken at any time to remove the burning sensation. Take ten grains of columbo in powder with twelve grains of magnesia three times a day. Regulate the bowels with rhubarb and calcined magnesia.

Refrain from the use of fermented liquors, animal fat, and greasy substances.

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## PAIN OF THE STOMACH.

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### TREATMENT.

This may arise from a variety of causes. Take red lavender, essence of peppermint, spirits of hartshorn or spirits of camphor, in warm water. Open the bowels with castor oil and elixir salutaris, a table-spoonful each. Apply a plaster of Burgundy pitch. Avoid errors in diet.

## DISEASES OF THE LIVER.

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### ACUTE INFLAMMATION OF THE LIVER.

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#### SYMPTOMS.

The symptoms of this disease are, pain in the right side, increased on pressure beneath the ribs, and extending to the right shoulder; inability to lie on the left side; dry cough, and sallow countenance. There is costiveness or diarrhœa; white tongue; high-colored urine; dry skin; and full and frequent pulse.

#### CAUSES.

It may be produced by a residence in hot climates; excess of spirituous liquors; suddenly suppressed perspiration.

#### TREATMENT.

Bleed from the arm as early as possible, taking a pint or more. Unless the pain be diminished, and the pulse becomes more natural, repeat the operation in six hours. The loss of blood locally by leeches is of great value.

Take ten grains of calomel with twenty grains of jalap in molasses; and keep the bowels loose by the daily use of Epsom salts.

Apply a large blister over the right side.

If this course fail to subdue the disease in a few days, excite a gentle soreness of the gums, as directed under the head of Chronic Inflammation of the Liver.

The diet should consist of rice, gruel, or arrow root; and the drink of toast water or barley water.

If the symptoms indicate the forming of an abscess in the liver as, shiverings, with a tumour and soreness in the right side, warm poultices and fomentations must be applied to the part, and the patient be supported by bark, wine, and nourishing food.

## CHRONIC INFLAMMATION OF THE LIVER.

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### SYMPTOMS.

This disease comes on slowly and mildly. There is a sense of fulness and dull pain in the right side; weight and weariness in the right arm; pain in the right shoulder; flatulenc; impaired appetite; a yellow tinge of the skin and eyes; sleepiness; and depression of spirits. The tongue is loaded, the bowels are generally costive, and the pulse intermit.

### TREATMENT.

Give a grain of calomel night and morning, and rub mercurial ointment, every night, a scruple or more, on the right side, till the gums become tender; and this effect be kept up cautiously till all symptoms of the disease disappear.

If the constitution of the patient be delicate, or, if on trial, calomel be found to disagree with him, give five grains of the blue pill night and morning, till the mouth is slightly affected, and continue it as directed.

The quantity of mercury to be used must be modified by the effect produced.

This course of treatment may be aided, in obstinate cases, by applying a blister to the right side and dressing it with mercurial ointment; or by rubbing the side night and morning with tartar-emetic ointment,\* of the size of a nutmeg, till a slight eruption comes on, when the ointment may be discontinued, and reapplied as the eruption recedes.

Keep the bowels open daily with Epsom salts.

Avoid stimulating food and drink.

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\* See Appendix.

## JAUNDICE.

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### SYMPTOMS.

In Jaundice, a universal yellowness tinges the skin and white of the eyes; attended with languor, debility, loss of appetite, and uneasy sensations about the stomach. The bowels are costive; the evacuations are destitute of bile; and the urine is high-colored, communicating a saffron dye.

### CAUSES.

The flow of the bile into the intestines being obstructed, it passes back into the blood, and produces the yellow color of the skin and eyes, and other symptoms characteristic of jaundice. This obstruction to the natural course of the bile may be occasioned by gall-stones in the ducts; by viscosity of the bile; by inflammation of the liver; and by enlargement of the neighbouring organs.

### TREATMENT.

When jaundice is caused by *gall-stones* there is most acute pain about the pit of the stomach, with nausea and vomiting, but with intervals of ease. In this form of the disease, give five grains of opium every four hours, or a tea-spoonful of laudanum every two hours, and repeat the dose more or less frequently according to the severity of the pain. The patient should be immersed in a warm bath, or flannels wrung out in hot water applied to the seat of pain. If the pain be acute, and the pulse full and frequent, blood must be drawn from the arm. After the pain is subdued, procure free evacuations from the bowels by given fifteen grains of calomel with twenty of jalap in molasses, followed, if necessary, by castor oil.

When the disease proceeds from *viscosity of the bile*, it comes on mildly, with languor, nausea, costiveness, and uneasiness at the stomach without pain. In this form of jaundice, dissolve ten grains of tartar emetic in half a pint of hot water, and take a table-spoonful every ten minutes till free vomiting ensues, and aid the operation by drinking freely of warm water. Take

five grains of calomel every third night, or five grains of the blue pill every night, and a draught of the infusion of senna \* every morning sufficient to keep the bowels well open.

If the disease originate in *inflammation of the liver*, which may be known by the soreness and tenderness on pressure under the margin of the ribs of the right side, adopt the treatment directed under the head of acute or chronic inflammation of the liver, as the case may be.

If the disease arise from *enlargement of the neighbouring organs*, medicine can avail but little. A grain of calomel with a grain of the extract of cicuta may be taken every night and morning for a few weeks. Increase the cicuta two grains each time, till nausea or dizziness follows, and continue at this dose.

In chronic cases of jaundice the patient should promote his general health by moderate exercise in the open air, by nutritious and easily digested food, and by procuring a daily evacuation from the bowels.

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\* See Appendix.

## DISEASES OF THE INTESTINES.

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### INFLAMMATION OF THE INTESTINES.

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#### SYMPTOMS.

This disease is short and rapid in its course, commencing with pain in the bowels, which soon becomes extremely acute, and is generally fixed about the navel. The bowels swell and are tender on pressure. There is tossing of the arms, great anxiety in the countenance, parched tongue, and excessive thirst. Nausea and vomiting ensue, with a rapid pulse, costive bowels, and great prostration of strength.

#### CAUSES.

The most ordinary cause is cold combined with moisture applied to the feet or bowels. It is sometimes a sequel to other diseases.

It may be distinguished from colic by the rapid pulse, continued pain, position of the body, and expression of the countenance.

#### TREATMENT.

Blood should be taken largely from the arm, from one to two pints. If this should not afford relief in six or eight hours, the bleeding must be repeated, regarding the age and strength of the patient. Leeches applied over the bowels are of great value, and should not be omitted when they can be procured.

If the stomach will bear liquids, give a solution of Epsom salts, castor oil, or infusion of senna,\* in small doses frequently repeated. If all liquids are rejected, mix five grains of calomel with ten grains of pill cochiaë and form into pills, and give every six hours, aiding the effect by frequent injections of warm salt water.

Apply to the bowels flannels wrung out in hot water.

After the violence of the symptoms are subdued, a blister may be applied over the bowels, but not in the early stage of the disease.

The diet should consist solely of gruel and arrow root, with toast water or rice water.

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\* See Appendix.

## COLIC.

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### SYMPTOMS.

Colic is attended with a griping pain of the bowels, which occasionally remits, and is relieved by pressure. Sometimes there is vomiting of bilious matter, with obstinate costiveness, and spasmodic contraction of the muscles of the abdomen.

### CAUSES.

It may be occasioned by wind ; exposure to cold ; improper articles of diet ; excess of bile ; and hardened fæces long retained.

Colic is distinguished from inflammation of the bowels by the absence of fever, by the pain occurring in paroxysms with intervals of ease, and by its being relieved on pressure.

### TREATMENT.

If the patient be young and plethoric, and the pain so great as to threaten inflammation, take a pint or more of blood.

If the pain be not severe, it is better generally, first to procure operation from the bowels by taking any mild laxative, as, in most instances, it is produced by some irritating substance in the bowels. But when the pain is violent, this must first be allayed, and then the bowels opened.

Give three grains of opium every hour, or sixty drops of laudanum every half hour, till the pain be subdued ; and if this be rejected by vomiting, give half a table-spoonful of laudanum in a little liquid in a clyster. Continue these means till some relief be obtained, then give ten grains of calomel with a grain of opium, followed in two hours by an ounce or two of castor oil ; aiding the operation by injections of warm salt water, frequently repeated.

If there be great irritability of the stomach, with obstinate costiveness, give four grains of calomel with half a grain of opium every hour till the medicine operates on the bowels or produces salivation.

Apply flannels wrung out in hot water.

If these means should be ineffectual, immerse the patient in a warm bath and put a large blister or mustard poultice over the bowels.

Pouring cold water on the bowels has succeeded after other remedies have failed.

When relieved, the patient should be particularly careful, for a few days, to avoid errors in diet, to keep his bowels open, and guard against taking cold.

## CHOLERA MORBUS.

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### SYMPTOMS.

This disease comes on suddenly, with severe and frequent vomiting and purging of bilious matter and griping pains in the bowels; followed with weak and frequent pulse; excessive thirst; cramps of the legs, and great prostration of strength.

### CAUSES.

Its causes are, exposure to wet and cold when heated; cold drinks; indigestible food; unripe or acid fruits.

### TREATMENT.

In the commencement, if the symptoms be not severe, and the vomiting has not long continued, it may be encouraged by taking warm drinks of flaxseed tea or gruel, until the acrid bile is thrown off, when the action of the stomach may be quieted by moderate doses of opium.

But if the disease be violent in the beginning, or if it has continued some time, opium must be given immediately, and very freely, to arrest the vomiting.

Give fifty drops of laudanum or more, according to the violence of the symptoms, in a small quantity of gruel, and repeat the dose every twenty minutes, till the vomiting abates. If this be thrown off the stomach, mix from three to five grains of powdered opium with a little hard soap, and form into pills, and give every hour. Continue to give opium in one of these forms till the vomiting is subdued, but if not successful, give a clyster containing half a table-spoonful of laudanum mixed with a little tea, and repeat it if necessary. Apply a blister to the

stomach, fomentations to the stomach and bowels, and mustard poultices \* to the feet.

Let the patient take the least possible quantity of drink, till the irritability of the stomach is lessened.

After the vomiting subsides, give ten grains of calomel with a grain of opium, followed in three hours by castor oil, to remove the remaining bile.

During convalescence, the diet should be light, easy of digestion, and taken in small quantities at a time.

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\* See Appendix.

## SPASMODIC CHOLERA.

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### DIFFERENT NAMES.

This disease has been called Spasmodic, Malignant, Indian, and Asiatic Cholera; different names to designate the same disease. Spasmodic Cholera differs from the cholera morbus of our own climate, in the number it attacks, its overpowering violence, and great fatality.

### SYMPTOMS.

The disease commonly begins with a watery purging, attended with little or no pain, but with a sense of uneasiness about the stomach and bowels. These precursory symptoms may continue for a day or two, or only for a few hours, when the patient is suddenly attacked with vomiting and purging of a thin fluid like rice water. Immediately, there is a rapid sinking of the strength. The pulse is feeble, or cannot be felt. The features sink. The lips and cheeks become livid, blue, or lead colored, and the extremities and surface cold and livid. There is excessive thirst; coldness of the breath and tongue; failure of urine; and violent and painful spasms of the legs, arms, and chest. The intellect is unimpaired.

### TREATMENT.

In the early stage of the disease, if the attack be severe, blood must be drawn from the arm, taking a pint or more, according to the strength of the patient. He should be placed on a hammock, and the whole body freely rubbed with the naked hand or with dry cloths. Bags containing hot sand, ashes, or salt, should be applied to the limbs and sides; bottles of hot water to the feet; and mustard poultices\* over the stomach and bowels.

If pain and distress be great, give immediately a hundred drops of laudanum in a little warm water, and this may be repeated every twenty minutes, till the patient is relieved.

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\* See Appendix.

As soon as the irritability of the stomach is quieted by laudanum, mix ten grains of calomel with one grain of opium and give, either in powder, or made into a mass with a little moistened flour and divided into two or three pills. If rejected, repeat the dose till one is retained, after this, it may be repeated once in two or four hours, till the urgency of the symptoms abates, continuing to give laudanum, at intervals of an hour or more, if there be pain and distress.

In three or four hours give an ounce of castor oil, and repeat the dose every two hours, till the medicine produces free evacuations from the bowels.

To promote warmth, give, at short intervals, two grains of camphor; a little hot brandy and water; ten drops of essence of peppermint or a tea-spoonful of sulphuric ether in warm water.

After the disease is subdued, and before the health is restored, the patient should cautiously avoid all errors in diet, taking only light nourishment, and in small quantity. He should guard against a too early exposure; refrain from making much bodily exertion; and procure a daily evacuation from the bowels.

### PRECAUTIONS.

In seasons when cholera prevails, precautions may be adopted, which, there is good reason to believe, may prevent the disease. Live temperately, but on good, nutritious food, avoiding much or ill-assorted mixtures. The body should not be exposed to excessive fatigue, nor to sudden variations of heat and cold. The mind should be kept free from anxiety, and the fear of disease. Personal cleanliness should be strictly observed. The apartments should be freely ventilated, and sprinkled with chloride of lime.\* Check, by moderate doses of calomel and opium, the first indication of diarrhœa, as this is a premonitory symptom of the disease, and if attended to at the commencement, may be readily removed, but if neglected, may result in cholera. Preserve a healthy state of the stomach and bowels.

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\* See Putrid Fever.

## DIARRHŒA.

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### SYMPTOMS..

Diarrhœa consists in frequent liquid discharges from the bowels, without straining, and with little or no griping. After long continuance, it is attended with paleness of the countenance, debility, and emaciation.

It may be distinguished from cholera morbus by the discharges being without bile, and by there being no vomiting of bile; and from dysentery by the discharges not consisting of blood and mucus, and by the absence of fever.

### CAUSES.

The disease is produced by atmospheric changes; unripe fruits; acids; large draughts of cold water; impure water; and by eating fresh meats and vegetables on arrival in port, after long absence at sea.

### TREATMENT.

When diarrhœa is produced by improper food, which will be indicated by head-ache, nausea, or foul tongue, the stomach should be unloaded by taking thirty grains of ipecacuanha in a little warm water; or the solution of tartar emetic,\* till free vomiting ensues.

If the disease comes on gradually, commence by taking three grains of calomel with five grains of rhubarb in molasses, and if it fails to operate in six hours, let it be followed by a table-spoonful of castor-oil. After the action of the medicine, take a table-spoonful of chalk mixture† with ten drops of laudanum, and this is to be repeated after every discharge.

Take, every morning, or every other morning, as the effect may be, two grains of calomel with three grains of rhubarb; and every night a powder, containing two grains of ipecacuanha and one of opium.

A table-spoonful of the chalk-mixture should be taken every

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\* See Appendix.

† Ibid..

three hours, occasionally adding ten or twenty drops of laudanum.

In cases not of long standing, nor unusually severe, this treatment will be remedial, but if not successful, more astringent medicines must be employed.

When a more powerful astringent may be necessary, mix tincture of kino two parts, tincture of rhubarb one part, and laudanum one part, and take a tea-spoonful every four hours in a table-spoonful of the infusion of cascarilla and canella. \*

The diet should be of plain fresh meats, rice, and toasted bread, with a little brandy and water, or port wine.

Till the bowels are restored to health, strict attention to the diet is of the greatest importance, cautiously abstaining from taking food either in large quantities, or of an indigestible quality. Flannel should be worn next the skin, and gentle exercise daily practised.

When diarrhœa is brought on in a ship's crew by unwholesome water, its noxious quality may be corrected by mixing with it some lime, chalk, or alum.

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\* See Appendix.

## DYSENTERY.

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### DESCRIPTION.

Dysentery consists in a frequent inclination to evacuate the bowels, with griping pain, violent straining, and bearing down. After an evacuation the patient feels as though something remained which should be thrown off. The contents of the bowels are not voided, or if so, they are in small hard lumps. The discharges are scanty, slimy, frothy, and are often loaded with shreds of membranes, or mixed with blood; sometimes they are of pure blood, and sometimes like the washings of meat and extremely fœtid. In a severe form, there is nausea and vomiting, and excruciating pain in the bowels.

### CAUSES.

Dysentery frequently occurs in warm climates, and is most prevalent in summer and autumn. Between the tropics it often rages with great violence, and spreads rapidly where many persons are confined together, as on board ships. In higher latitudes the disease is milder, and less frequent. It may be produced by sudden changes of weather from warm to cold and moist; by unripe and acid fruits taken to excess; improper food; impure water; exposure to cold air when the body is heated.

### TREATMENT.

If the pain be constant and acute, and the patient young and strong, a pint of blood should be taken from the arm.

Take thirty grains of ipecacuanha in a little water, and aid the vomiting by drinking warm water.

When the stomach is quieted after the action of the emetic, ten grains of calomel with two grains of opium should be taken in molasses, and followed in three hours by a table-spoonful of castor oil, or an ounce of Epsom salts. During the operation on the bowels, drink of rice water or flaxseed tea.

Till the disease abates, take every night three grains of ipecacuanha with one of opium in syrup or mucilage.

For a few days, five grains of calomel with one grain of opium are to be given every morning, and followed in two hours by castor oil or Epsom salts. Immediately after the operation of the medicine, give a powder containing one grain of ipecacuanha and one of opium, and repeat it every three hours.

If there be a frequent desire to go to stool, or much pain in the lower part of the bowels, throw up an injection, consisting of half a pint of flaxseed tea or solution of gum Arabic and two tea-spoonfuls of laudanum, and repeat it occasionally, as may be necessary.

In warm climates, where a disease of the liver is often connected with dysentery, it is advisable to employ calomel in doses to affect the system, but this must not be attempted till the inflammatory symptoms are subdued by bleeding, and by cathartics of calomel and salts. For this purpose, add two grains of calomel to the powder of ipecacuanha and opium directed to be taken at night, increasing the opium to two grains if need be, and rub a drachm of mercurial ointment inside the groins night and morning, till the mouth becomes sore, and the disease disappears.

During the disease, the food should consist solely of rice, arrow root, and flour gruel; the drinks, of rice water, flaxseed tea, and a solution of gum Arabic.

Till the bowels have recovered from the effects of dysentery, it is highly important to avoid all errors in diet, both in quality and quantity. None but the lightest and most easily digested substances should be taken, and of these, but a small quantity at one time.

As dysentery is sometimes contagious, every precaution should be taken to arrest it. As soon as one of the crew is known to be affected with it, he should be separated from those in health, and all unnecessary intercourse between them prevented. His discharges should be immediately removed, and the air of his apartment purified by the fumes of vinegar. The ship should be well aired and kept clean; the personal cleanliness of all on board strictly attended to; and all exciting causes of the disease cautiously guarded against.

## TYMPANY.

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### SYMPTOMS.

This disease is a distension of the belly from a collection of wind, either in the intestines, or in the peritoneal sac. It is preceded by flatulence, expulsion of wind, and costiveness. The belly soon becomes greatly enlarged, is tense, and on striking with the hand, gives a sound like that made on the head of a drum. The part retains no depression on pressure, and no fluctuation can be felt. There is heat, thirst, pain in the bowels, and loss of strength.

It may be distinguished from dropsy, by the hardness over the bowels; by the want of fluctuation; and by the parts immediately reacting on removing the pressure of the finger.

### TREATMENT.

When the collection of air occurs in the intestines, it must be expelled by giving strong infusions of any of the spices, doses of the essence of peppermint, camphor, and opium. Apply to the bowels very cold water or pounded ice. Use liniments of spirits of hartshorn and spirits of turpentine of equal parts; clysters of warm salt water, and support the bowels by a bandage.

After the removal of the disease, strengthen the bowels by taking tincture of bark with tincture of rhubarb, and by a nutritious diet, avoiding flatulent vegetables.

## WORMS.

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### VARIETIES.

The worms inhabiting the intestinal canal are of different kinds, but those most commonly found are, the *tape worm*, which is flat, consists of many joints, and is often many feet in length; the *round worm*, which resembles the common earth worm, and varies from six to fifteen inches in length; and the *thread worm*, which is small, and about half an inch in length.

### SYMPTOMS.

The symptoms of worms are, head-ache; alternate paleness and flushings of the face; pain in the stomach; starting, and grinding of the teeth in sleep; itching of the nose; hardness and fulness of the belly; short, dry cough; variable appetite; offensive breath; emaciation; convulsions.

### TREATMENT.

The distinguishing symptoms of each variety cannot be pointed out with certainty. The *tape worm* produces greater and more rapid emaciation. There is a gnawing sensation in the stomach, and the nervous system is more affected than by the round or thread worm.

The remedy for the expulsion of the tape worm is the oil of turpentine; of this two table-spoonfuls should be taken at once on an empty stomach. If this should fail to operate actively and soon, the same quantity of castor oil should be taken to expedite its effect. The oil of turpentine may be repeated, if necessary, and the dose increased to two ounces.

The general symptoms enumerated are more frequently occasioned by the *round worm* than by either of the other varieties.

To remove these take half a pint of the infusion of Carolina pink root \* three times a day, and repeat this for three days in succession; on the fourth, take fifteen grains of calomel with

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\* See Appendix.

twenty of jalap in molasses. Calomel with jalap will rarely fail to dislodge worms from the intestines.

The characteristic symptoms of the *thread worm* are slimy stools, and a troublesome itching at the lower extremity of the bowels, occurring generally in the early part of the night, and preventing sleep.

To destroy these, take a tea-spoonful of the tincture of aloes and myrrh in a little sweetened water, morning, noon, and evening. Or, five grains of calomel with ten of powdered aloes, or an ounce of salts, frequently repeated, and injections of aloes dissolved in water.

## PILES.

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### DESCRIPTION.

Piles are small tumours, varying in size and form, situated at the inferior part of the intestines, either on the verge without, or within the bowel, and are attended with a sense of heat, pain, and itching.

When the piles are internal they produce acute throbbing pain on evacuating the bowels, and occasionally a considerable discharge of blood. When external they cause less suffering.

External and internal bleeding and blind piles, are varieties of the same complaint.

### CAUSES.

Piles may arise from long-continued costiveness; excessive walking or riding; irritating purgatives; or disease of the liver.

### TREATMENT.

Costiveness should in all cases be obviated by gentle and cooling laxatives, cautiously avoiding all cathartics which are found to irritate the piles. To accomplish this purpose, take every night a table-spoonful of a mixture of equal parts of sulphur and cream of tartar, in molasses. Or dissolve six ounces of Epsom salts in a pint of water, to which add one ounce of elixir vitriol, and of this take a table-spoonful or more every morning, to keep the bowels open.

Bathe the tumours with a strong tea of oak bark,\* or sumach leaves, adding half an ounce of sugar of lead to a pint; or with a strong solution of alum in water, cold. Apply stramonium ointment mixed with a little finely powdered sugar of lead. Let the patient sit over the fumes of burning tar or oakum. Give frequently clysters of cold fresh water. Twenty drops of elixir of vitriol may be taken night and morning in water sweetened. A cotton rag dipped in cold water and applied to the part will relieve the pain.

When the tumours swell and become painful, the greatest relief will be obtained from applying leeches, but if they cannot be procured, puncture the tumour with a lancet, and place over

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\* See Appendix.

it a warm bread poultice or flannels wrung out in hot water; and take ten drops of nitre with five of laudanum every hour, in any liquid.

If the bowel fall down, it is to be carefully replaced by pressure with the fingers, and pledgets of linen, or cotton, wet with the bark tea and sugar of lead are to be constantly applied, and the same liquid should be frequently injected into the bowel.

If these tumours form matter and ulcerate, all that can be done at sea is, to keep the bowels open and abstain from all stimulating food and drink.

Avoid all causes which have been found by experience to cause or aggravate the complaint.

## COSTIVENESS.

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### EFFECTS.

Costiveness of long continuance is productive of injury to the health, and may be the origin of important diseases. It produces pain in the head; vertigo; sickness at the stomach; loss of appetite, flesh, and strength; oppression at the stomach and bowels; piles; and dyspepsia. Whenever the evacuations, for a length of time, are hard and dry, so as to render a dejection difficult and painful, medicines should be taken to excite the action of the bowels, and procure a full evacuation.

### TREATMENT.

To correct this state of the bowels, pill cochiae should be taken at night, one or more pills, sufficient to produce one movement daily; and five grains of the blue pill should be occasionally added to stimulate the biliary organs. Other medicines may be taken as, Epsom salts, castor oil, senna, rhubarb, or cream of tartar.

It is not well, however, to accustom the bowels, for a long period, to the daily stimulus of purgative medicines, as their constant use tends to injure the powers of digestion, and impair the health. Persons, therefore, who are subject to costiveness should endeavour to remove the complaint by means of diet; abstaining from salted meats and heating drinks, eating ripe fruits, and substituting vegetable for animal food.

## RUPTURE.

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### DESCRIPTION.

Hernia or Rupture consists in the protrusion of some part of the bowels, or other contents of the abdomen, chiefly in the groin, scrotum, or navel, though it occasionally takes place in other parts. It appears as a tumour, and in some persons comes on gradually from laxity of the constitution, but most frequently is formed suddenly in consequence of violent bodily exertions as leaping, carrying great weights, &c. When the tumour from any cause becomes inflamed and is attended with pain, soreness, and tension, followed by sickness, vomiting, and obstinate constiveness, an effort must be immediately made to restore the protruded part.

### TREATMENT.

Promptly reduce the bowel by manual effort. For this purpose, place the patient on his back with the hips elevated a little above the head, and the thighs raised towards the body. Then make a steady and gradually increased pressure on the tumour with one hand, in the proper direction, while with the fingers of the other you attempt to reduce the bowel by small portions at a time. Continue the effort twenty or thirty minutes, but without violence. If this fail, the patient is to be bled to fainting, when another attempt is to be made. If this also fail, he is to be put into the warm bath, and while there, the attempt must be again repeated. Next, try the effect of ice or snow mixed with common salt and applied to the tumour, or apply the strongest solutions of nitre and sal ammoniac mixed, or lotions of ether. Give an injection, composed of half a drachm of tobacco boiled for ten minutes in half a pint of water, and this may be repeated in half an hour. A final attempt is now to be made, and if ineffectual, an operation must be performed by a competent surgeon, and this should not be delayed beyond the first twenty-four hours.

To guard against the dangers of a rupture, persons subject to this complaint should wear a truss. The truss invented by Dr. A. G. Hull, of New York, is superior to all others. It is worn with ease, and in many cases will effect a cure of the rupture. It may be purchased of druggists or apothecaries.\*

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\* See Appendix.

## DROPSY OF THE ABDOMEN.

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### SYMPTOMS.

This is a swelling of the belly from accumulation of water. It is generally preceded by dryness of the skin, loss of appetite and strength, and a sense of oppression about the stomach and bowels. It comes on gradually, and increases until the whole abdomen becomes uniformly swelled and tense. A fluctuation of the water may be felt by laying one hand on one side of the belly and striking the opposite side with the other. As the disease advances the difficulty of breathing increases, the countenance becomes pale and bloated, and there is immoderate thirst.

### TREATMENT.

The course of treatment must be the same as has been directed under the head of *General Dropsy*. If these means fail, the belly must be supported by flannel bandages applied moderately tight, and the water be drawn off by tapping. To perform this operation a surgeon must be employed.

## DISEASES OF THE KIDNEYS AND BLADDER.

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### INFLAMMATION OF THE KIDNEYS.

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#### SYMPTOMS.

Pain in the loins, and down the thigh of the affected side, with retraction of the testicle. The pain is increased by inhaling a full breath, walking, sitting upright, or lying on the opposite side. The urine is high colored, is voided frequently, and in small quantities at a time. The pulse is frequent and hard, and the tongue loaded. Frequently there is nausea and vomiting.

#### CAUSES.

It may arise from external contusions, strains of the back; violent and severe exercise; exposure to cold; or from calculous conerctions in the kidneys or uretus.

#### TREATMENT.

As inflammation of the kidneys, unless early subdued, often runs into abscess, it is necessary to take blood largely and repeatedly, according to the age and strength of the patient.

Apply around the back and bowels flannels wrung out in hot water and immerse him in a warm bath.

Ten grains of calomel with one or two of opium should be given in molasses and followed by castor oil, to procure free evacuations, and the bowels should be kept loose by salts, or castor oil, or infusion of senna.\*

Let the patient drink freely of solution of gum Arabic, or flaxseed tea; and give a clyster of flaxseed tea or solution of starch

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\* See Appendix.

frequently, to which a tea-spoonful of laudanum may be added to alleviate the pain.

Blisters are not to be employed, nor heating and stimulating balsams, as they may irritate the kidneys and aggravate the disease.

Inflammation of the kidneys is very liable to terminate in abscess, which may be known by the mixture of pus with the urine. When this is the result, the patient should feed solely on vegetable diet, and abstain from all stimulating drinks. The only medicine useful at this stage is opium, two or three grains of which may be taken at a dose, or it may be administered in the form of laudanum in a clyster.

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## INFLAMMATION OF THE BLADDER.

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### SYMPTOMS.

There is pain, swelling, and soreness of the bladder; a frequent desire, and great difficulty in discharging urine, often a total suppression, with constant inclination to expect the contents of the bowels.

### CAUSES.

Generally, it arises from inflammation in the neighbouring parts; irritation of gravel; or gonorrhœa extending to the bladder.

### TREATMENT.

The treatment is similar to that in inflammation of the kidneys.

When there is a suppression of urine, the catheter must be occasionally introduced.

If the inflammation in clap extends to the bladder, inject into it, by means of the penis syringe, warm flaxseed tea, or solution of gum Arabic, or sweet oil with warm water, throwing up a gill at a time, and repeat it frequently. The same articles should be taken as drinks.

## BLOODY URINE.

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### DESCRIPTION.

In this disease, the blood is sometimes equally diffused throughout the urine, and its presence is known only by the clot which forms in the vessel; and sometimes it is unmixed with urine, flowing pure in considerable quantity.

### CAUSES.

It may proceed from blows and falls; from violent exertion; or from the gravel or stone.

### TREATMENT.

If external injury be the cause of the disease, or if it be attended with fever, and with a full, hard pulse, blood should be taken from the arm; but under other circumstances, bleeding is not necessary.

The bowels must be kept open by gentle laxatives, as castor oil or salts.

Give twenty drops of the tincture of muriate of iron, three times a day, in a wine-glassful of sweetened water. If there be much pain, two grains of opium, or a clyster of flaxseed tea with a tea-spoonful of laudanum may be given.

Drink freely of mucilaginous drinks, as flaxseed tea, or solution of gum Arabic, to which occasionally add ten grains of nitre.

If the bleeding endanger life, give every three hours, a powder containing two grains of sugar of lead and three grains of opium.

## INCONTINENCE OF URINE.

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### DESCRIPTION.

This disease is a frequent or continual discharge of urine, with difficulty of retaining it, unaccompanied with pain.

### CAUSES.

It may be produced by excessive use of spirituous liquors ; strains ; or local debility.

### TREATMENT.

Apply a blister to the lowest part of the back bone. Dash cold salt water upon the loins. Take twenty drops of the tincture of muriate of iron, three times a day, in a wine-glassful of sweetened water ; or tincture of bark and tincture of kino mixed each a tea-spoonful, three times a day ; or twenty drops of tincture of cantharides twice daily, in a little flaxseed tea, increasing the dose each time until some pain is felt at the neck of the bladder.

When there is a perpetual dribbling of the urine, a bag of oiled silk, or India rubber should be worn as a urinary receptacle.

## STRANGURY, OR STOPPAGE OF URINE.

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### DESCRIPTION.

In this disease there is a frequent desire to make water, attended with a smarting pain, heat, and difficulty in voiding it; or there is a total obstruction to the flow of urine.

### CAUSES.

It may be occasioned by inflammation of the urinary organs; irritation of the urethra in clap; spasm of the neck of the bladder; gravel; stricture; cantharides taken in the form of tincture or applied in a blister.

### TREATMENT.

If there be symptoms of topical inflammation, as acute pain, soreness and tenderness on pressure, blood should be drawn from the arm.

No remedy so immediately relieves the pain as a clyster of flaxseed tea, or other liquid, with a tea-spoonful of laudanum. Apply flannels wrung out in hot water; put the patient into a warm bath; rub over the bowels and inside the thighs with a liniment of equal parts of spirits of hartshorn and sweet oil. Give three grains of camphor with three grains of opium every two hours; or a tea-spoonful of sweet spirits of nitre with thirty drops of laudanum every half hour. Open the bowels freely with castor oil or Epsom salts.

Take mucilaginous drinks, as solution of gum Arabic, flaxseed tea, or barley water.

If these means fail, the water must be evacuated by the introduction of a bougie or catheter, in the manner pointed out under that head.

## GRAVEL AND STONE.

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### DESCRIPTION.

The diseases known by the name of Gravel and Stone are so nearly allied, that they may be described under the same head. They consist in the lodgement of calculous concretions in the kidneys, bladder, or urinary passages. When sand or small stones are discharged with the urine it is called the *gravel*, but when any portion is retained in the bladder, and becomes too large to be expelled, it is denominated the *stone*.

The disease is accompanied with a dull pain in the loins, tenderness and reaction of the testicle, and numbness of the thigh. The urine deposits sand or sediment and is sometimes bloody. There is pain before and after voiding the urine, which is discharged frequently, and in small quantity at time. Occasionally there is nausea and vomiting.

### TREATMENT.

During a fit of the gravel, if the pain be very acute, the patient should be bled, and take an active purgative of castor oil, or salts and senna. Apply to the part flannels wrung out in hot water, or place the patient in a warm bath. After the bowels have been well opened, administer a clyster of flaxseed tea or starch containing two tea-spoonfuls of laudanum. Three grains of opium may be taken every two hours. Mucilaginous clysters should be frequently repeated, as these alone contribute much to the relief of the patient.

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## DIABETES OR IMMODERATE FLOW OF URINE.

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See the article under the head of *Constitutional Diseases*.

## DISEASES OF THE ORGANS OF GENERATION.

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### GONORRHOEA, OR CLAP.

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#### DESCRIPTION.

Clap is contracted during sexual intercourse, and appears, in different constitutions, at very different intervals after infection has been conveyed. With some persons it will show itself in the course of three or four days, but with others, not before the expiration of some weeks; usually, however, it is perceptible in from six to fourteen days. It begins with an itching of the glans or head of the penis, and a sense of soreness along the course of the urinary passage, which is soon followed, on pressing the glans, with a discharge of whitish matter.

In a few days, the discharge of matter increases, assumes a greenish, or yellowish hue, and becomes thinner; the orifice of the urethra becomes inflamed; the stream of urine is smaller than usual, and there is a considerable degree of pain and scalding heat on making water.

When the inflammation prevails in a high degree, the penis is curved downward with great pain during an erection, which often occurs, involuntary, when the patient is warm in bed, and this is called *chordee*. In some instances a small quantity of blood is voided on making water, arising from the rupture of a small blood vessel.

In consequence of inflammation, the foreskin becomes often so swollen at the end that it cannot be drawn back, this is called a *phimosis*; or being drawn behind the glans, it cannot be returned, and this is called *paraphimosis*.

As the disease advances the symptoms become more severe and distressing, the adjacent parts sympathize with those already affected, the bladder becomes irritable exciting a frequent inclination to make water, which is discharged with difficulty and often only in drops. Sometimes the glands of the groins enlarge and form buboes; and sometimes the testicles become swollen and painful.

Where there is not much inflammation, few or none of the last mentioned symptoms will arise, and only a discharge with a slight heat, or scalding in making water will prevail.

The disease will subside in the course of two or three weeks under a judicious mode of medical treatment and strict attention to diet, and will soon after entirely disappear; but if the case be neglected, or improperly managed, and the patient indulge in sensuality and intemperance, the cure will be protracted for several months.

## TREATMENT.

When the disease is known to exist, the person should confine himself to a vegetable diet; abstain from all stimulant food and drink, from sexual intercourse, and from all unnecessary exercise.

The following is one of the best prescriptions in clap. Take balsam copaiva, sweet spirits of nitre, spirits of lavender, and soft water, of each two ounces, and add half an ounce of powdered gum Arabic, and half an ounce of laudanum; mix well together, and of this take a tea-spoonful three times a day on sugar, or otherwise. Injections into the penis should not be used until the inflammation is in some degree reduced, as injuries to the part result from too early an application of astringent injections.

The bowels should be kept freely open with Epsom salts or any mild laxative.

After a few days when the inflammation has abated, moderately astringent injections may be employed, as white vitriol two grains to an ounce of water, which may be gradually strengthened; or a slight solution of alum, in the proportion of two grains to an ounce of water. These should be used cold, and be repeated three or four times in the course of the day.

If the glands in the groin swell, apply to them cloths wet with a strong solution of sugar of lead, and in case of *swelled testicles*, adopt the treatment directed under that head.

If there be great irritability of the bladder, with pain, exciting a frequent desire to evacuate the urine, inject into the bowels a little flaxseed tea with a tea-spoonful of laudanum, and apply warm fomentations to the part.

If there be *chordee*, take at night a grain of opium with two of camphor, and apply around the penis a rag wet with a strong solution of sugar of lead.

If there be *phimosis* or *paraphimosis* employ the remedies prescribed under that head.

Gonorrhœa and the Venereal Disease are not one and the same disease, they do not arise from the same matter of contagion, but are diseases specifically different. Mercury is of no value in the cure of Gonorrhœa.

## GLEET.

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### DESCRIPTION.

Gleet is a slimy discharge from the mucous glands of the urethra, and is unattended with pain or scalding in making water. It is without the power of communicating itself, and may be of long continuance. It proceeds from local debility, and is a frequent sequel of clap when neglected or mismanaged. It may exist independent of clap, and be occasioned by strains, excess of venery, and other causes of weakness.

### TREATMENT.

Use injections consisting of two grains of white vitriol to an ounce of water ; or a solution of alum slightly astringent, and repeat the injection three or four times daily.

Take twenty drops of the tincture of cantharides morning and evening ; and increase the dose each time until it produces a slight irritation in the bladder ; or twenty drops of the tincture of muriate of iron, three times daily in a wine-glassful of cold water ; or thirty drops of balsam copaiva, night and morning on brown sugar. Wash the parts daily with cold salt water. The treatment must be continued many days after the symptoms have disappeared, as the discharge is liable to return.

## STRICTURE.

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### CAUSES.

One or more strictures in the urethra sometimes take place from the long continuance of the clap, especially if it has been attended with symptoms of inflammation, or has been of frequent occurrence. A stricture occasions a considerable degree of difficulty in making water, and instead of its being discharged in a free stream, it splits into two, or perhaps is voided drop by drop.

### TREATMENT.

A stricture can be successfully treated only by a regular and long continued use of the bougie. Begin with one of a moderate size and increase it gradually; but previous to its introduction into the urethra, bend it into the shape of a catheter, and soften it with oil. Employ no force in introducing it, but where a resistance is met with, rest for a short time, that the pressure may produce a dilatation of the contracted part. Wear it at first only about half an hour, gradually increasing the time as the parts can bear it. Avoid all exercise during its introduction, and continue its use for a considerable length of time.

If a bougie cannot be introduced, or, if introduced, does not afford relief, it becomes necessary to employ lunar caustic to remove the stricture which must be performed by a physician or surgeon.

## SYPHILIS, OR VENEREAL DISEASE.

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### CHANCRE.

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#### DESCRIPTION.

The Venereal Disease arises from a poisonous matter, usually contracted in sexual intercourse with an infected person, and having the power of acting both locally and constitutionally. The earliest ordinary mark that infection has taken place is the appearance of a small pimple, generally about the head of the penis or on the foreskin, having a hard inflamed base, and an irritable point, at which it ulcerates, and discharges a limpid matter, and forms into a spreading ulcer, which is called a *Chancre*. The ulcer becomes inflamed, is painful and sore, is unequal at the bottom, has prominent edges, discharges a greenish matter, shows no disposition to heal, and, if left to itself, spreads. The interval between the application of the poison and its effect upon the part is uncertain. Sometimes a chancre will commence as early as the third or fourth day after contamination, sometimes a few days later, and in some instances, only after an interval of several weeks. If the venereal poison be absorbed and carried into the system, the disease will gradually manifest itself in various constitutional symptoms, as ulcers in the mouth and throat, pains in the limbs, ulcers on the skin, swelling and ulceration of the bones.

#### TREATMENT.

In the treatment of the venereal disease, mercury is the only remedy, and no other is deserving of confidence as being adequate to effect a radical cure. In administering mercury, it is not necessary to excite a severe salivation, but it should be given until there is a considerable increase of spitting, as evidence that the constitution has become affected by it. It is necessary to keep up a slight soreness of the mouth, for a longer or shorter period, according to the severity of the disease. The remedy must be continued in such quantity as to keep the

system under its influence, not only till all the symptoms are removed, but for several days after the ulcers are healed. In mild cases, it will be sufficient to continue the use of mercury for a fortnight after the disappearance of the sores; but in severe and obstinate cases, it is advisable to sustain the mercurial action for a month after all symptoms of the disease are removed.

Mercury may be introduced into the system in two ways, either in the form of unction externally, or by some preparation internally. It is advisable to begin with a small quantity, whether given internally or applied externally, and to increase it gradually, unless the progress of the disease requires a more rapid introduction of the medicine. The external application is deemed the most eligible mode, but in obstinate cases, it is best to use mercury in both forms. When unction is used, one drachm of strong mercurial ointment should be rubbed in every night and morning on the inside of the thighs by the patient himself, for twenty minutes, before a moderate fire. If mercury be employed internally, two grains of calomel should be taken night and morning, and if it operate on the bowels add a grain of opium. In either form, the quantity should be increased or diminished according to the effects it produces, and should be continued until the patient perceives a copperish taste in the mouth, with foetor of breath, tenderness of the gums, and increase of spitting. The mercurial action should be kept up with uniformity at this point for a proper length of time, and be continued for a week or two after the chancres have healed, and all the symptoms have disappeared.

During the mercurial course, the patient should avoid exposure to cold and moisture. His diet should be light, consisting of fresh animal food, bread, rice, vegetables, and ripe fruits; and he should abstain from all meats and drinks of a heating and stimulating nature.

If the constitution becomes debilitated by the use of mercury, discontinue it internally, take a grain of sulphate of quinine night and morning, with a more nutritious diet; and when the health is improved mercury may again be taken.

If the mouth become painfully sore, not only discontinue the use of mercury but employ frequently as a gargle a solution of gum Arabic, or borax, an ounce to a pint of water, and take a table-spoonful of sulphur at night.

If the chancre be not readily affected by the mercurial course, or has an unhealthy appearance, touch it with blue vitriol, or lunar caustic, or sprinkle into it red precipitate, every two or three days, and wash with a lotion composed of one grain of muriate of mercury and eight ounces of water, and dress it morning and evening with mercurial ointment.

The part should be carefully guarded against every cause of excitement or irritation.

## PHIMOSIS.

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### CAUSES.

Phimosis is a disease of the penis, in which the foreskin cannot be drawn back so as to uncover the glans, or head of the penis. A chancre is the most frequent cause of this complaint, but it is sometimes brought on by the clap. In either case the treatment is the same.

### TREATMENT.

If the foreskin be drawn back with difficulty and pain, a phimosis may be apprehended, and if possible should be prevented by poulticing the penis, by rest, doses of salts, and keeping up the end of the penis. When the prepuce or foreskin has drawn so around the glans that it cannot be drawn back, and thus prevents the dressing the chancres, injections must be thrown under the prepuce, or the operation for phimosis be performed.

Inject under the prepuce a warm solution of ten grains of sugar of lead to an ounce of water, or one grain of the oxymuriate of mercury to an ounce, and repeat it frequently. Apply warm bread poultices to the part every two hours, and direct to it the steam of hot water. Move the foreskin occasionally to prevent its adhering to the glans. When matter is confined under the prepuce, or the chancres cannot be made to heal, it is necessary to lay open the part. This is done by passing under the foreskin a pair of scissors, or other sharp instrument; and slitting it up until the head is uncovered. The only dressings necessary are lint, and over it soft poultices. The chancres are then to be dressed as before directed.

## PARAPHIMOSIS.

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### TREATMENT.

Paraphimosis is the term applied when the prepuce, or foreskin being drawn back cannot be returned again over the head of the penis. When this occurs it should be immediately reduced. To effect this, the part should be well washed with cold water, then make a pressure upon the glans with the fingers four or five minutes, to diminish its size by squeezing the blood out of it, and in this state bring the prepuce forward. If this fail, resort to washes of a strong solution of sugar of lead, half an ounce to a pint of water, and employ poultices and purgatives. If these be ineffectual, the stricture must be divided by a sharp instrument, and dressed as directed in *Phimosis*.

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## BUBO.

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### DESCRIPTION.

A Bubo is a swelling and inflammation of the glands of the groin in consequence of the absorption of venereal matter, generally from a chancre. It comes on with a pain in the groin, with hardness and swelling which continue to increase. It is usually confined to one gland. There is redness of the skin, pulsation and throbbing in the tumour, and if the inflammation goes on, matter is soon formed.

## TREATMENT.

Endeavour to prevent the swelling from proceeding to the formation of matter. To effect this, rub in on the inside of the thigh, and around the edges of the tumour, night and morning, a quantity of strong mercurial ointment of the size of a nutmeg, and gradually increasc, if necessary, to double that quantity, and continue the unction till the tumour and hardness have entirely subsided. The directions in the use of mercury, prescribed under the treatment of the venereal disease, should be followed in the treatment of the bubo.

Apply to the tumour rags wet with a strong solution of sugar of lead, half an ounce to a pint of vinegar and water; or sal ammoniac, an ounce to a pint, and repeat the application every half hour or oftener. Wash the bubo frequently with a saturated solution of salts. Keep the bowels open daily with salts.

Should a salivation with soreness of the mouth ensue, discontinue the unction for a few days, use as a gargle a solution of gum Arabic, or borax, or alum, and resume again the use of the mercurial ointment, continuing it for a week or two after the disappearance of the bubo.

The diet should be light and simple, avoiding stimulating meats and drinks, and exposure to cold and moisture.

If the formation of matter cannot be prevented, apply to the bubo a warm poultice of bread or flaxseed, and renew it frequently till the tumour becomes full and pointed, when it should be opened with a lancet. After this, dress the part with lint, and place over it a plaster of mercurial ointment, occasionally repeating the poultice. Continue the ointment for a few days after the sore is healed.

## SWELLED TESTICLE

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### CAUSES.

The most common cause of a Swelled Testicle is, either the improper use of astringent injections in clap, or of bougies in stricture. Sometimes it arises from the common causes of inflammation, as blows, falls, application of cold, and occasionally, it is produced by the measles.

### TREATMENT.

The loss of blood, locally, by leeches, is very beneficial, and should not be omitted, when they can be obtained.

The patient should confine himself to a horizontal posture, keep the part supported by a bandage, apply cold lotions of a solution of sugar of lead, or sal ammoniac, in the proportion of an ounce to a pint of vinegar and water, and occasionally, a poultice made of bread and a weaker solution of sugar of lead. Apply a blister over the testicle. Keep the bowels freely open with salts.

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## DROPSY OF THE SCROTUM.

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### DESCRIPTION.

This is a colorless, smooth, transparent swelling of the scrotum, gradually extending itself from the lower to the upper part.

### TREATMENT.

If attended to on the first indications of the disease, it may occasionally be removed by keeping applied to the part cloths wet with a strong solution of sugar of lead, or sal ammoniac; but in most cases, the only remedy is an operation, which must be performed by a surgeon.

## PERSONS APPARENTLY DROWNED.

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As soon as the body is taken out of the water, the clothes must be immediately stripped off, the body wiped dry, and wrapped up in blankets well warmed. Place the body on the back with the head a little raised. If the weather be cold, it should be placed near a fire, but, in warm weather, between heated blankets in the open air. Apply warm cloths, bladders or bottles of hot water, bags of heated salt or sand to the pit of the stomach, between the thighs, under the arm pits, and to the soles of the feet; wrap the body in blankets dipped in hot water; immerse the body in a warm bath. At the same time the whole body should be rubbed with the hand or with hot woollen cloths.

As soon as possible, introduce the pipe of a common bellows into one nostril, carefully closing the other and the mouth; blow the bellows gently, in order to inflate the lungs, till the breast be a little raised, the mouth and nostrils should then be set free, and a moderate pressure made with the hand upon the chest. This process should be frequently repeated, and at the same time the other means are to be continued, as frictions, fomentations, and placing the body in warm water, or in warm ashes, salt, or sand. If a bellows cannot be procured, blow into one of the nostrils through a pipe or quill, closing the other nostril and mouth as before, and if these are not at hand blow into the mouth while both nostrils are closed. These efforts should be perserved in for three or four hours, as it has often happened, that though means employed for one hour have not succeeded, the same means continued for two or more hours have at length had the desired effect. When the patient is able to swallow, a small quantity of warm wine, or weak brandy or spirit and water should be given.

## BATHING.

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Bathing having been recommended as a valuable auxiliary to other remedies in the treatment of several diseases, a few observations are added respecting its more general use.

### COLD BATH.

The diseases for which the cold bath, under one form or another, may be applied with advantage, are numerous. In the treatment of some fevers, cold bathing, in the form of ablu-tion or washing, is directed in the preceding work, as eminently beneficial; but it is highly important to attend to the precautions pointed out in cases which may seem to require this remedial process. As a general tonic remedy in various chronic diseases, the cold bath is of great value, as in cases of languor, tremors in the limbs, general debility, feebleness in the joints, fatigue from slight exertion, and in similar cases; where there is no permanent morbid obstruction, nor disease of any particular organ. When judiciously applied, it gives strength to the nervous system, increases muscular elasticity, accelerates the circulation of the blood, and promotes the different secretions.

The bather should always go into the cold bath when warm and seldom, if ever, exceed one plunge. If on coming out of the bath there is a quick return of warmth, a glow over the whole body, the bath may be considered as beneficial; but if the person feels chilly, or finds himself affected with head-ache, or tightness across the chest, it is evident that it is injurious.

## SHOWER BATH.

This is a species of cold bath, and, in some respects, may be considered as the best and safest mode of cold bathing, as it may be prolonged and repeated at pleasure, and as the head and breast are secure from danger by receiving the first shock. In this form, the temperature of the water may be easily adapted to the circumstances of the patient. The water may be poured in a column upon the head and shoulders, or into a bucket perforated with numerous apertures and held over the head.

Immediately after the use of the cold bath, the body should be rubbed with a dry and coarse cloth, and moderate exercise should be taken.

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## WARM BATH.

The warm bath has a peculiar tendency to alleviate local irritation, and to induce sleep and repose. It is a remedy more peculiarly adapted to very weak and irritable constitutions, whom the shock produced by cold immersion would overpower, and who have not sufficient vigor of circulation for an adequate reaction. In such constitutions, the warm or hot bath will be found a valuable tonic remedy in the complaints enumerated under the head of *Cold Bath*. The time of continuing in the warm or hot bath may vary from ten to thirty minutes. Friction with a coarse cloth or brush, while in the water, adds much to the good effects of the bath, and should not be omitted.

In all cases, where cold or hot bathing is used for the purpose of strengthening the system, salt water is preferable to fresh water.

# S U R G E R Y .

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DISLOCATIONS, FRACTURES, &c.



# DISLOCATIONS.

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## GENERAL REMARKS.

When the surfaces of the bones forming the joints are forced from their proper position, the accident is termed a dislocation, and is caused by blows, falls, or other violence.

The symptoms of a dislocation are, inability to move the injured limb, which is shortened, lengthened, or distorted; pain in the part affected increased on motion; unusual depression at the joint.

In restoring the bones to their proper position, no violent exertion should be made; but the limb should be extended gradually and steadily. If the difficulty be great, the patient may be bled, and put into a warm bath, and while there an attempt should be again made to restore the limb.

After a dislocation is reduced, if there be pain and swelling in the part, apply the prescriptions directed under the head of *Sprains*.

*Dislocation of the Lower Jaw.*—This may happen from laughing, gaping, or from blows. It may be known by the difficulty in speaking and swallowing; by the distortion of the mouth; and by the under jaw projecting forward.

To reduce the bone, place the patient firmly on a low seat, and let an assistant support his head. The operator is first to wrap the end of a handkerchief round his thumbs, and then introduce them into the patient's mouth, as far back as possible between the teeth of the upper and under jaws. At the same time, he is to place his fingers firmly under the jaw, and while thus applied, press the jaw forcibly down with the thumbs, and moderately backwards with the palm of the hand.

*Dislocation of the Neck.*—When the neck is dislocated, the head falls forward upon the breast, the patient is instantly deprived of sensibility, and if he is not quickly relieved, death follows.

To reduce it, seat the patient on the ground with an assistant to support him. Then standing behind, raise the head from the breast, let the assistant press down the shoulders, and gradually pull the head straight up, till the dislocation is reduced; or if this does not happen with moderate extension, it may at the same time be gently moved from side to side. On the reduction being completed a sudden crack or noise is heard, and there is immediately a partial recovery of the faculties.

*Dislocation of the Shoulder.*—This joint is more frequently dislocated than any other. When the dislocation is downward, the arm is a little longer than in the natural state, the head of the bone may be felt in the arm-pit; the arm cannot be moved forward or backward, and there is a depression at the joint. When the dislocation is upward, there is an elevation behind the shoulder, and a shortening of the arm.

This dislocation is, generally, easily reduced by having a strong man place his arms around the body of the patient so as to hold him firmly, and another, taking the patient by the hand, gradually and strongly extends the limb, while a third person presses against the head of the bone, and reduces it to its place.

Where this course will not be sufficient, place the patient in a chair, pass a broad bandage around the chest under the arm pits so that he may be firmly held; then tie a towel or handkerchief just above the elbow and let it be held by one or more persons, who are slowly to extend the arm, while the operator, by another handkerchief passed around the limb near the arm-pit, is to raise the bone to its proper place.

*Dislocation of the Elbow.*—In this case the fore arm is half bent, and every attempt to extend it occasions acute pain. The situation of the bones is easily discovered.

This is reduced by having the shoulder firmly held and the fore arm extended by assistants, while the operator grasps the joint with both hands, and presses the bones into their places. After reduction the arm must be kept perfectly at rest in a sling.

Dislocations of the *Wrists* and *Fingers* are obvious, and require only gentle extension to effect their reduction.

*Dislocation of the Thigh.*—When the thigh bone is dislocated upwards and outwards, the limb is an inch or two shorter than the other, and the knee and foot are turned inwards and cannot be turned outwards.

When the dislocation is downwards and inwards, the limb is from two to three inches longer than the other, and the knee and foot are turned outwards and cannot be brought back.

When the head of the thigh bone is dislocated upwards and outwards, the patient should be placed on his opposite side

upon a table or bed, and be firmly held by assistants. The limb must then be gradually extended by means of a sheet fastened just above the knee. As soon as the head of the bone is brought on a level with the socket by the assistants, the operator is to force it into the cavity by pressure inwards. When the dislocation is downwards and inwards, the extension is to be made downwards and outwards, while the upper part of the bone is to be pushed outwards by the operator.

*Dislocation of the Patella, or Bone of the Knee.*—The knee bone may be dislocated outwards, inwards, and upwards. The dislocation on either side is easily reduced by relaxing the muscles of the leg and bending the thigh, then pressing down the edge of the bone which is most remote from the joint.

In the dislocation upwards, the appearance of the part is decisive of the nature of the injury. In this case, a bandage of cotton cloth is to be passed a number of times round the lower part of the thigh and immediately above the knee bone, so as to press with some force upon the bone. To this bandage is to be attached another, which is to be carried on each side of the leg and under the foot, and to be firmly attached to that round the thigh, that it may gradually draw down the knee bone. As the limb should be kept extended, a splint having strips of cotton cloth rolled round it may be placed behind the knee, and be confined to the limb by a roller.

*Dislocation of the Knee.*—Dislocations inwards or outwards are the most frequent, and are conspicuous at first view.

These are easily reduced on making gentle extension, and pushing the bones in the proper direction.

*Dislocation of the Ankle.*—Dislocations of the foot inwards or outwards are the most frequent, and are easily reduced.

In accomplishing the reduction, relax the muscles by bending the leg on the thigh; let the knee be firmly held by one assistant, and the foot gradually drawn into a line with the leg by another, while the operator presses the bones to their proper places. Dislocation of the *Toes* is to be treated as dislocation of the *Fingers*.

## FRACTURES.

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### GENERAL REMARKS.

In the treatment of Fractures or Broken Bones, it will be necessary to bleed the patient immediately after the fracture of a large bone, if he be young, or of a full habit, or has at the same time received any bruise, or if there be much swelling and inflammation. His diet should be light and easy of digestion, and he should be kept quiet and cool, and the bowels opened by salts. It is of great importance to keep the patient dry and clean, to prevent excoriation of the flesh from lying. The limb should not be continually on the stretch but in a posture slightly bent. The bandages must not be applied with more tightness than is necessary to retain the bones in their situation. If inflammation ensues, apply lotions of sugar of lead, or vinegar and water, and avoid pressure on the part from the bandages and splints. In ordinary cases, the best external application is a mixture of vinegar and spirit. The bandages should be daily wet with this, and the dressings be reapplied every four or five days, or oftener if necessary. If at sea, the patient's bed should be swung that he may move with the motion of the vessel. In a healthy middle-aged person, a fracture of the thigh, or bones of the leg will require about two months for the cure; the bones of the arm about six weeks, and the smaller bones about three weeks. After the bones are united, and the patient commences using the limb, the liniments directed under the head of *Sprains* may be useful.

*Fracture of the Nose.* — To replace the bones of the nose when broken, pass a catheter or quill into the nostrils, and push the fragments outwards, guarding the outside of the fracture with the fingers. If the fragments are inclined to fall in, they must be supported by lint introduced into the nostril.

*Fracture of the Lower Jaw.* — This fracture is easily discovered by the touch. To replace the bone, let the patient's head be firmly held a little back, and the operator introduce the fingers of one hand into the patient's mouth, and apply the fingers of the other hand on the outside, and thus bring the parts together. Then, if it can be obtained, apply pasteboard softened in vinegar along the side and under the jaw; but if this cannot be had, place a thick pledget of lint directly over the fracture. Over this a bandage with four tails is to be applied with its centre upon the chin, the two lower tails being tied over the top of the head, and the upper over the back part.

Keep the patient perfectly quiet. He must be fed entirely on liquids, and avoid moving the jaw until the bone has become united.

*Fracture of the Collar Bone.* — When this bone is fractured, the patient cannot lift up his arm. The fracture is easily detected. Make a roller of strips of cotton cloth, and let it be five or six inches long, and three or four inches thick, and place this in the arm-pit of the side affected. Take hold of the patient's elbow, and carry it forward, upward, and inward against the breast. An assistant is to support the arm in this position, while the operator, having a long roller, is to place one end of it in the arm-pit of the opposite side, and thence apply the bandage over the upper part of the arm, and across the back to the same situation. The arm and trunk are to be covered with circles of the roller as far down as the elbow, drawing it more tightly the lower it descends. Compresses are next to be placed along the fractured bone, and these are to be secured by another roller passing over them and thence under the elbow and under the opposite arm-pit. The patient's hand is to be kept in a sling.

*Fracture of the Ribs.* — A fracture of a rib can generally be discovered by the seat of the pain, and by placing the hand on the suspected part, and directing the patient to cough, when a grating of the bones will often be perceptible.

Apply a piece of adhesive plaster to the part, and over it proper compresses; then put a broad bandage firmly round the chest, so as to impede the motion of the ribs.

When the pain is severe, with difficulty of breathing, cough, and spitting of blood, the patient should be bled copiously and repeatedly, the bowels freely opened with salts, and the diet light and cooling.

*Fracture of the Arm.* — This fracture is readily discovered. To accomplish the reduction, relax the muscles of the arm by moderately bending the elbow, and slightly draw the lower portion of the bone downward. Then, place a strip of adhesive plaster round the arm over the part affected, and apply four splints, well guarded with tow or other material, extending from the shoulder to the elbow, one on the outside, one on the inside, one on the front, and another on the back of the arm. These should be flexible, and of an inch or more in width, and are to be carefully secured by a flannel roller, moderately tight. The elbow and whole of the fore arm are to be supported in a sling, throughout the treatment of the case.

*Fracture of the Fore Arm.* — When both bones of the fore arm are broken, the injury is readily known. If only one be

broken, the grating of the bones can be easily heard on turning the arm.

Having replaced the bones by making a slight extension, apply round the injured part a strip of adhesive plaster, and place two broad splints covered with some soft material, and of sufficient length to reach from the elbow to the fingers, one on the inside and the other on the outside of the fore arm; and keep these in their proper position by a bandage. The arm is to be placed in a sling, with the palm of the hand towards the breast.

*Fracture of the Hand and Fingers.* — When the bones of the hand are broken, apply a piece of adhesive plaster, folded cotton, or lint, and over all a roller beginning about the wrist, and firmly encircling the hand and fingers.

In fractures of the fingers, incase the finger in a plaster, or softened pasteboard, and apply a roller. The hand should be supported in a sling.

*Fracture of the Thigh.* — A fractured thigh may be known by sudden inability to move the limb, and by a grating noise on rubbing together the ends of the bones.

The patient is to be placed on a hard bed, the necessary extension is then to be made by a couple of assistants, extending the limbs, one securing the upper part, and the other gently drawing the lower, while the operator replaces the bones in their proper position. Next, place under the thigh a bandage made after the following manner; take strips of cotton cloth of about four inches in width, and of length more than sufficient to surround the limb; then take another strip of cotton of the same length as the thigh, and after placing it on a table, begin laying the other strips across it, one by the side of the other, letting each lower one lap two inches on to the one above. The strips being all arranged across the piece first laid down, they are to be stitched in this position. This bandage being placed under the thigh the operator begins with the lower strip, and places it round the limb, letting the ends pass one over the other, and covers this with the next one above and so on, till all the cross pieces are applied, the last of which is to be fastened with a pin. Then two splints covered with tow or other soft material are to be applied, one of which should reach from the hip to the outer ankle, and the other from the groin to the inner ankle, and these are to be firmly secured by strings of tape; and the limb is to be placed on a thin pillow nearly as long as the thigh, or it may be laid in a box. The limb must not be moved again until the fracture is united, which will require about two months. Care must be taken to preserve it from being injured by the motion of the vessel, and to guard against pressure of the bed clothes.

*Fracture of the Patella, or Bone of the Knee.* — This fracture is readily known. The bone is generally broken transversely, the lower part remains fixed at the knee, but the upper is drawn upward on the fore part of the thigh.

In this case, the leg is to be extended, and the two portions of bone to be pushed close to each other, and retained so by a bandage applied after the following manner ; take a roller of cotton cloth of sufficient length, and apply the centre of it with tolerable tightness just above the upper piece of the bone, then carry it round the thigh under the knee, where it is to be crossed, and passed over the knee directly under the bone, and then again under the ham, and above the knee during a number of turns. The limb must be kept extended, by a long, strong splint well covered with flannel or tow, placed under the ham, and confined to the thigh and leg by strings of tape.

In a longitudinal fracture of this bone, the divided parts are easily retained by moderate pressure with a bandage.

*Fracture of the Leg.* — Whether one or both bones of the leg be broken may be known from the deformity, or the grating on moving the bones.

The patient being placed on a bed, extension is to be made by assistants, while the operator restores the bones to their proper position ; then, a bandage made in the manner described in fracture of the thigh is to be placed under the leg, and the operator is to apply a piece of adhesive plaster round the injured part, and lay down the strips of the bandage as directed in fracture of the thigh. All the strips being brought over and fastened, three splints guarded with flannel or tow are to be applied, one on the outside, one on the inside, and the other on the top of the leg ; each of the splints at the side must extend from above the knee to beneath the ankle, and all be firmly secured by strings of tape. The limb may be supported on a pillow, and raised a little above the level of the body.

*Fracture of the Foot and Toes.* — The treatment is the same as in similar injuries of the hands and fingers.

## WOUNDS.

There are different kinds of wounds, as *Incised, Punctured, Contused, Gun-shot, and Poisoned Wounds.*

*Incised Wounds, or Cuts.* — In cuts where the blood appears in a considerable quantity, more particularly if of a very bright

red color, the first object is to stop the bleeding. To accomplish this, if the wound be in the limbs, apply a tourniquet as directed under that head, or if this cannot be obtained, take a long strip of strong cloth of linen or cotton, about two inches in breadth, and pass twice round the limb, between the wound and the heart, and after tying it in a knot, introduce into this bandage, between the turns, a short piece of stick and twist the bandage until the flow of blood is checked. Then remove from the surface of the wound the effused blood with a sponge, pressed out of moderately warm water.

An assistant should then place the edges of the wound as evenly together as possible, and hold them in this state, until another has secured them in this condition by strips of adhesive plaster, of sufficient length, applied across the line of the wound. Over these strips, a dressing of lint is to be applied large enough to cover the whole wound, and this is to be kept in its place by more strips of adhesive plaster; another dressing of lint or tow is to be put on the part, and these secured by such bandages as the situation of the wound will admit. The tourniquet should now be slackened a little, and should no bleeding follow, it may be slackened still more, so as to allow the circulation to go on; it should not, however, be removed from the limb but remain loosely on, to be ready to stop any sudden gush of blood which may happen. The part should be kept in a perfectly quiet state. The first dressings should remain two or three days, or until the discharge of matter renders the separation of them easy. After the first dressings are removed, the dressings may be repeated every twelve or twenty-four hours, according as the discharge is more or less abundant or acrid.

When the divided vessels are small, the bleeding soon ceases spontaneously, and no measures need be taken on this particular account; but the wound should be dressed as directed.

If there ensue pain, inflammation and swelling of the wound, make a frequent application of warm poultices. If the healing be interrupted by soft, spongy, red elevations called proud flesh, sprinkle on a little red precipitate, or burnt alum, and dress with basilicon ointment.

For a few days the bowels should be kept open with any mild medicine, and the patient should abstain from stimulating food and drink.

If there be an alarming flow of blood from a wound in a part where no tourniquet can be applied, fill the wound with lint or sponge pressed in, dress with strips of adhesive plaster, and apply pressure over the part by a bandage. The dressings should remain till it is loosened by the discharge of matter.

*Punctured Wounds.*—These are made by a sharp pointed instrument, as by the thrust of a sword, or by a nail. All punc-

tured wounds and stabs are, in general, much more dangerous than cuts, from their extending to a great depth, often injuring important parts and organs, and as they are particularly apt to be followed by inflammation, deep-seated abscess, or locked jaw.

When the wound is deep, and no considerable quantity of blood has been lost, it may be necessary to bleed from the arm and give a purgative, more particularly if symptoms of inflammation ensue. Close the orifice of the wound with strips of adhesive plaster, and apply gentle compression with a bandage along the course of the puncture. Rest is to be observed and a low diet.

If the pain and inflammation increase, apply frequently warm poultices, and when the matter is formed the tumour must be opened as directed under the head of *Abscess*.

*Contused Wounds, or Bruises.* — Contused wounds, or bruises, where the fibres have been torn asunder by some violence, are productive of worse consequences than cuts. They are scarcely ever attended with any serious effusion of blood.

In slight bruises, attended with discoloration of the part, but where the skin is not much injured, it will be sufficient to keep applied to the part cloths wet with warm vinegar or a mixture of vinegar and spirit, or a solution of sugar of lead; and to bathe with a liniment of equal parts of spirits of hartshorn and sweet oil, or opodeldoe, with the occasional application of a poultice.

When a greater degree of violence has been done to a part, and the fibres have been lacerated, the same treatment must be adopted as is directed under the head of *Gun-shot Wounds*.

*Gun-shot Wounds.* — These are the most considerable of the contused wounds; and what is said of them, will apply more or less, to all contused wounds, according to the degree of contusion. Gun-shot wounds do not bleed much, and unless very considerable vessels are lacerated, they do not bleed at all. The greatest degree of bleeding is always when the dead parts are detached, eight or ten days after the injury.

In severe cases amputation must be performed by a surgeon. Where this is not necessary, the parts must first be cleansed with warm water, then the edges of the wound must be united as well as their unequal surfaces will permit; retaining them with strips of adhesive plaster, and a bandage moderately tight. But if the state of the wound from its violence does not admit of such treatment; apply lint dressed with basilicon ointment, and over this place warm poultices. The dressings may be renewed every twelve or twenty-four hours, according to the discharge of matter.

If the wound be considerable, particularly if any internal part be affected; or if it be followed by pain and inflammation, bleeding as freely as the constitution will admit, with gentle purging, and a cooling liquid diet will be necessary.

*Poisoned Wounds.* — The bites of poisonous serpents are followed, within a few hours, by pain in the wounded part, swelling, fainting, vomiting, and convulsions.

The most successful treatment in these cases is, to apply immediately a tight ligature round the limb, directly above the wound, and to suck the wound well for some time which may be done with safety, provided there is no soreness about the mouth at the time; then cut the bitten part away with a sharp instrument; or destroy it by the application of a heated iron or caustic potash; or make incisions into the wound with a lancet till it shall bleed freely, and pour into it hot spirits of turpentine. After this treatment has been adopted, remove the ligature.

*Burns and Scalds.* — In slight burns or scalds, the part should be plunged immediately into very cold water, and continue there till the pain and smarting subside, or the water should be constantly applied by means of linen cloths.

In severe cases, where the skin is destroyed, scrape raw potatoes and apply cold to the part, renewing the application every six hours, and continue this twenty-four hours; then apply to the part linen cloths dipped in a liniment consisting of equal parts of lime water \* and sweet oil, and change the dressings every twelve hours. This liniment must be used as long as the pain and smarting continue; then promote suppuration by the application of soft poultices of slippery elm bark thickened with bread, or of flaxseed and bread. When matter is formed, the sore must be thickly covered with very finely powdered chalk, and the poultices be frequently applied over it.

If the blisters are large, they may be opened by a needle, and the water suffered to drain off; but care must be taken not to remove the skin.

If soft, red elevations called proud flesh are formed, they must be covered with red precipitate or burnt alum.

Other modes of treatment may be adopted. Sprinkling flour thickly over the blistered and denuded surfaces of burns and scalds affords immediate relief, and this application should be repeated, as often as the discharge may have moistened the preceding layer of flour. No after dressing need be used, but it should be allowed to remain until the cure is effected.

Chloride of soda, in solution, has been recommended as a

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\* See Appendix.

speedy and effectual remedy in burns and scalds, in the proportion of half an ounce of chloride of soda to a pint of water. Linen cloths dipped in this solution are to be kept constantly applied to the part affected.

*Frost Bites.*—When a part has been exposed to intense cold, it becomes bloodless, and is without feeling. This injury often happens to the hands and feet of sailors from long-continued exposure in winter.

As soon as discovered, the frozen part should be rubbed with snow or immersed in cold sea water, until it recovers the natural warmth and sensibility. The application and the friction must be continued till the desired effect be produced, when the water may be restored to a common temperature in the most gentle and gradual manner. External heat should on no account be applied to a frozen limb, as it will become gangrenous almost instantly.

If mortification of the part ensues, apply poultices of powdered charcoal mixed with bread, and dress with simple ointment.

*Chilblains.*—These are small swellings of the heels, feet, and hands, attended with redness, itching, and heat of the skin. They occur during the winter season, and are produced by sudden transitions of temperature.

Rub the part affected with snow, or pour over it the coldest water, which will soon remove the heat and itching; then apply heated alcohol or vinegar; or a mixture of spirits of turpentine or spirits of hartshorn with sweet oil; or equal parts of opodeldoc and tincture of myrrh.

If the parts ulcerate, apply poultices, and dress the sores with basilicon ointment mixed with either of the preceding articles, occasionally adding a little red precipitate.

*Ulcers.*—Ulcers or sores are often produced by wounds, burns, and frost. The healing process depends much on the health and former habits of the patient.

In recent ulcers or sores, all that is necessary is to keep the air from the part by the application of lint dressed with simple ointment. In sores having thick prominent edges, with fungous or proud flesh, and which discharge a foul, offensive matter, apply poultices of powdered charcoal mixed with bread; lotions of blue vitriol, eight grains to half a pint of water, or of lunar caustic, four grains to half a pint; or basilicon ointment slightly reddened by the addition of red precipitate.

In all ulcers that admit of dressing, the proper application of a bandage is of the greatest importance; ulcers of the leg especially require it. Apply firmly round the limb strips of

adhesive plaster until the sore be covered, and over these a bandage. Renew this dressing every night and morning, and touch the sore with some of the articles mentioned, if necessary.

The limb should be kept at rest, and stimulating meats and drinks avoided.

*Sprains.*—A sprain is the violent extension of the parts round a joint, which swell and become tender and painful. The effects of a sprain are often of long continuance.

Rest will do more towards removing the complaint than any application. Bathe the part with spirits and vinegar; opodeldoc; a mixture of tincture of camphor, spirits of hartshorn, spirits of turpentine, and sweet oil; solutions of sugar of lead; apply poultices; pour on cold salt water.

*Whitlow.*—A whitlow is an inflammation, with a forming of matter about the end of the finger; and is attended with severe pain.

In the early stages, attempt to remove the inflammation by leeches, washes of a solution of sugar of lead, and blisters; but if this does not succeed in two days, the part must be freely opened, and the matter discharged, as, if delayed, it may cause extreme suffering, and the loss of a joint. It may then be dressed as a common ulcer.

*Blood-letting.*—In blood-letting, the patient may lie down, sit down, or stand up; each of which positions may be chosen according to circumstances. A tape, or other bandage, is to be made to encircle the arm about two inches above the elbow, moderately tight, so as to distend the veins; of these, that is to be chosen which has no pulsation or beating beneath. The arm of the patient is then to be extended, with the hand firmly clenched, and the operator, having the blade bent to a right angle with the handle, is to hold the lancet between the forefinger and thumb of his right hand, with one half of the blade uncovered, and rest his hand on the three remaining fingers, while the thumb of the left keeps the vein steady. Thus prepared, he is to push the point of the instrument forward, in an oblique direction, into the upper side of the vein, until an incision of sufficient size be made; keeping the point of the lancet in as straight a direction as possible, to prevent dipping it into the parts below; and then cautiously to withdraw it. During the discharge of blood, the arm should be kept exactly in the same position as when the lancet was introduced.

When a sufficient quantity of blood has been drawn, the bandage is to be untied, and the lips of the wound being carefully brought together, a small fold of cotton rag is to be ap-

plied upon the surface, and secured in that position by a bandage passed round the arm above and below the elbow.

*Application of the Tourniquet.*—This instrument is designed to stop the effusion of blood, when any of the great arteries of the extremities are wounded.

The pad is to be applied above the wound, in the course of the bleeding vessel. The tape is to be carried round the limb, and to be tied immediately above the cushion; a loop is to be left for the stick to be introduced, so as to screw the tape quite tight about the limb. The stick must be kept in the hand of an assistant.

This being done, the bleeding soon ceases, and means must then be used to stop, altogether, the flowing of the blood, as directed under the head of *Wounds*.

*Application of Leeches.*—The skin, where it is wished they should be affixed, should be washed perfectly clean with warm water, and they should be allowed to crawl upon dry cloth, so as to render them perfectly dry.

Should there be difficulty in making them take hold, the part, to which they are to be applied, may be moistened with a little warm water, or puncture it with a lancet and rub the blood over it. Flannels wrung out in hot water and applied to the part increase the bleeding. Salt put on the head of the leech will make it disgorge the blood. Dip the head of the leech in vinegar and strip the blood out at the mouth and thus the leech may be preserved for use again by being placed in fresh water. Lint or adhesive plaster placed on the orifice will stop the bleeding.

*Extraction of a Tooth.*—Always turn a tooth inward if the circumstances will admit. First cleave the gum from the tooth to be extracted quite to the edge of the socket with a gum lancet or point of a penknife. Then press the gum before the point of the hook, till it rests upon that portion of the tooth contiguous to the socket. If the hook suits the tooth, let the fulcrum of the instrument rest upon the opposite side of the jaw, then with a gentle but sufficient force roll the instrument in a semicircular curve, till the tooth comes quite out. If the hook be too large for the tooth, roll the end of a handkerchief round the fulcrum.

*Opening an Abscess.*—When the suppuration is completed, and the tumour has become very soft, and is near the surface, it is to be opened with a lancet, in the part which is most dependent. But if a tumour be pointed, and the skin at the apex be of a light color, it should be opened at this point; care being taken to press the matter perfectly out. A tent of lint, of the

size of a goose quill, should be introduced into the orifice, and kept there by a strip of adhesive plaster, removing it two or three times a day to press the matter out, and then replacing it.

*Introduction of a Catheter.*—The catheter may be introduced when the patient is standing, sitting, or lying down. The operator should hold the head of the penis between the thumb and fore finger of the left hand. The penis is then to be drawn upward; the catheter being well oiled, is now to be introduced into the urinary passage directly downwards, with the concavity towards the abdomen; slowly bringing the handle of the catheter forward and backward, till the instrument enters the bladder. The urine will follow the removal of the wire within the catheter. Great care should be taken to exercise no force, either in introducing or withdrawing the instrument.

The *Bougie* is introduced in the same manner, with additional directions under the head of *Stricture*.

*Administering a Clyster.*—A clyster machine should be preferred if at hand, but if not, a bladder with a pipe attached to it may be used instead of it. Pour the liquid to be injected into the bladder, which is to be secured by a piece of twine; and when it is sufficiently cool, the pipe must be introduced into the fundament, the patient being previously placed upon his side. The contents of the bladder should then be pressed gradually, but with some force, till the whole is thrown up.

A D V I C E  
ON THE  
PRESERVATION OF HEALTH  
IN  
HOT CLIMATES.

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PRELIMINARY OBSERVATIONS.

The prevention of disease is the subject of the following pages. This depends, not upon any one circumstance, but upon a watchful regard to many. Negligence in one point may undermine every barrier erected against the inroad of disease, and sickness enter by stealth, in the midst of fancied security. Much of the sickness, which occurs to seamen in hot climates, is the effect of their own errors; and might often be prevented by a regard to judicious regulations; and adhering to a few salutary precautions. But sailors, beyond every other class of persons, are heedless of the present and improvident of the future. Disease, so long as it is not present, has few fears for them; and the fatal examples of careless indifference to the influence of climate, which they often witness, seem rather to urge them to abuse the present, as the future is so peculiarly uncertain. This indifference to the chances of disease, this prodigality of life should, by every possible means, be corrected.

The health of a ship's crew depends, in a great measure, upon circumstances within the control of the owners and officers. They, therefore, are bound by duty and interest, to shield the sailor from the dangers which beset him on his arrival in a hot climate. Much may be done by preparation before the commencement of the voyage, in the proper selection of food; in the cleanliness of the vessel; in having a sufficient number of hands; and in providing well the medicinal preparations, which the dangers of the climate may require.

Much must depend upon the exertions of the master of the ship. By judicious management, and adherence to the advice offered in the remainder of this work, he may protect his crew from the dangers of a sickly climate, and render most essential service to his owners. Sickness interrupts the progress of the voyage; detains those in health exposed to imminent dangers; and disappoints the expectations of owners. All these, and many more evils, would in many instances be avoided, if the master of the ship would exercise his authority, for the protection of the crew from the dangers of the climate. His duty to those intrusted to his control, and vigilance for the interests of his employers, demand of him the exercise of every means for the preservation of their health. The claims of humanity call on him to perform with fidelity and parental regard, the duties of his responsible station.

The interests and improvement of seamen have, within a short period, excited the sympathy of the public mind; and many philanthropists have united their exertions, to promote the good of this unlceded, and long neglected portion of the community. Such charitable efforts cannot fail in time to mitigate their sufferings, and to exert a happy influence upon their habits and characters. When they see themselves the objects of systematic kindness, and learn by experience, that the promotion of their good is desired by those, with whom they are connected in the pursuits of life, it will awaken and strengthen in them the resolution of improvement. By the judicious exertions of the friends of seamen, the bond of union between the sailor and the landsman will grow stronger; and they who have long been considered as almost without the circle of social life, will become more the objects of its sympathies and charities.

To add to perspicuity, and to facilitate a reference to each division of the subject, I shall class my remarks under the separate heads of *Air — Clothing — Food — Drink — Exercise — Sleep — Moral Influences*.

*AIR. — Bad Air originating in a Ship.* — The materials and construction of a ship will affect the health of all on board. If bound to a hot climate, she should be built of well-seasoned materials; and be constructed in such a manner, as to admit a free circulation of air through all her apartments. Moisture in the confined parts of a ship will generate disease in a tropical climate; and this moisture cannot be avoided, if she be built of ill-seasoned wood, or if her apartments be not well ventilated. A moist air penetrates every part, including the clothing and bedding, and has a pernicious effect on the health. Sickness frequently follows wet weather, especially in a hot climate, from the combined influences of heat and moisture in confined places. If the cargo consist of vegetables, fruits,

or other articles containing much moisture, and these be kept in close and unventilated apartments; disease is almost sure to be generated, and in its course to assume a most fatal form. Not only is confined moisture in itself productive of sickness; but the danger is increased, from the exposure of the crew to the unhealthy influences of dews and rains in a tropical climate. Diarrhœa, dysentery, and ship fever are frequently the product of this state of the air. This fruitful source of danger to the health should be strictly regarded; and every means tending to preserve dryness of the ship be promoted. Dr. Barton observes, "it is a fact, proved by experience and the coinciding testimony of medical men, in our own and foreign services, that a damp ship cannot be a healthy one." \*

Cleanliness in every part must be regarded; as filth destroys the purity of the air, and is productive of disease in hot climates. The deck should be frequently washed and scrubbed, but less frequently in moist than in dry weather; as the moisture may be a greater source of evil than the cleanliness may be of good. This service should be performed in the morning, that the deck may become dry during the day.

Much water in the hold of a ship produces foul air. If from any cause putrid matter be mingled with it, it will be necessary, occasionally, that water be poured in and pumped out till the part be cleansed and purified. The hold should be made as dry as possible, and must be preserved from being foul.

*Bad Air originating in the neglect of Personal Cleanliness.*—Neglect of personal cleanliness is a source of disease in tropical climates. If the apparel be long worn without washing, filth necessarily accumulates, and the body becomes surrounded by exciting causes, which, either alone, or in combination with others, cannot fail to add to the dangers of the climate. Many of the most fatal fevers originate in a disregard to this circumstance; and thus persons, in a short period by negligence in this point on board a ship, convert a healthy into a sickly atmosphere.

The same remarks are applicable with regard to bedding and hammocks. In a hot climate, there is a noxious vapour arising from a confined and filthy bedding, which should be attended to as soon as observed, and may easily be removed by attention to cleanliness and pure air. They should be exposed frequently to the sun and dry air, remaining, at each exposure, till they become sweetened and purified. If sickness occur, these regulations are still more necessary, and if suffered to pass unnoticed, their neglect will be followed by increased violence and extension of the disease. A slight degree of sickness may arise on

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\* Hints for Naval Officers cruising in the West Indies.

board a ship in a hot climate, which, at the commencement, may be little regarded; but speedily acquires a fatal character from accumulation of noxious effluvia, confinement, and inattention to personal cleanliness and ventilation.

Bathing, or washing the body in cold water, as it keeps the skin clean, cool, and soft, has a most salutary effect upon the health within the tropics. It should be practised frequently and regularly, and will be found to be one of the most powerful means for counteracting the unhealthy influence of a hot climate. See the article *Bathing*.

*Effects of Air from Marshy Grounds.*—In hot climates, lands which are low, woody, and uncultivated, influenced by long continued heat during the rainy season, generate a pestilential air more or less fatal to persons recently arrived from a milder latitude. This is produced by the putrefaction of vegetable substances on the margin of swamps; on the muddy banks of rivers; and on a miry seashore. Hence the health of a crew is in much greater danger in a harbour than at sea; as they are more exposed to the noxious air generated in low and marshy grounds.

Many instances have occurred of vessels near each other having health or sickness on board, as they were affected by a land or sea breeze. Vessels at anchor may be free from disease so long as they are exposed only to the sea air; but, if they change their anchorage, and come within the breezes from the low lands, disease will soon make its attack. This circumstance is of great importance, and should be cautiously regarded on arrival in port. How far the pestilential air generated in low and marshy grounds may extend, cannot be asserted with certainty, but the distance, probably, is not great. Dr. Blane remarks, that “when the ships anchored at Fort Rock, they found that if they anchored close to the shore, so as to smell the land air, the health of the men was affected; but upon removing two cables’ length, no inconvenience was perceived.”\*

Seamen while in harbour are exposed more or less to the deleterious influence of this air. In getting wood and water, and in performing other necessary duties for the ship on shore, the master should select such hours of the day as the breeze sets in from the sea to the land, when the labor may be performed without danger to their health; and not when the wind blows from woods and marshes. As this sometimes cannot be avoided, they must not be permitted to pass the night on shore, as the night air is, in these situations, fatal to the health, and men when asleep are more susceptible of the influence of the atmosphere, than when occupied in labor. Should exposure to the night air on shore be unavoidable; its pernicious effects on

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\* Observations on the Diseases of Seamen.

their health must be counteracted by the use of the spices and bitters which are products of these countries; particularly the Peruvian bark, either in powder, or in the form of tincture. Any of these articles given the men immediately before their going upon this unhealthy duty, will have a favorable effect in protecting them from the fevers of the climate.

The effluvium arising from swamps and marshes produces destructive ravages upon the health of all exposed for any length of time to its influence; giving rise to intermittents and other fevers more or less fatal according to the heat, rains, and season. It is a fact repeated by all medical writers on the subject, most of whom express opinions founded on personal observations during a long residence in hot climates, that the noxious qualities in the air originating in grounds of this description, in combination with long continued heat, will cause fevers of the worst form in persons habituated to a cold or temperate climate. They describe in strong language, the dangerous consequences resulting from staying long in port at any one time; and of performing harbour duties early in the morning, at mid-day, and after the setting of the sun. A knowledge of the prevailing diseases of such situations may be acquired by reference to another part of this work; and no shipmaster, who regards his own personal safety, or that of his crew, can fail to make use of every precaution against their attack.

To point out the *signs of an unhealthy country*, and thus enable seamen, on their arrival in port, early to detect and guard against the dangers which assail them, I have made the following extract from the writings of Dr. Lind.

“The first proof of an unhealthy country, is a sudden and great alteration in the air at sunset, from intolerable heat to a chilling cold. This is perceived as soon as the sun is set, and for the most part is accompanied with a very heavy dew. It shows an unhealthy, swampy soil, the nature of which is such, that no sooner the sunbeams are withdrawn, than the vapor emitted from it renders the air raw, damp, and chilling, in the most sultry climates; so that even under the equator, in some unhealthy places, the night air is cold to an European constitution.

“The second is, thick noisome fogs arising chiefly after sunset, from the valleys, and particularly from the mud, slime, or other impurities. In hot countries, the scent of these fogs may be compared to that of a newly cleaned ditch. Diseases, therefore, arising from this cause, generally take place in the night, or before sun-rising.

“The third is, numerous swarms of flies, gnats, and other insects, which attend stagnated air and unhealthy places covered with wood.

“The fourth is, when all butcher’s meat soon corrupts and

in a few hours becomes full of maggots; when metals are quickly corroded on being exposed to the open air; and when a corpse becomes intolerably offensive in less than six hours. These are proofs of a close, hot, and unwholesome spot. In such places, during excessive heats and great calms, it is not altogether uncommon, especially for such Europeans as are of a gross habit of body, to be seized at once with the most alarming and fatal symptoms of what is called the yellow fever, without even any previous complaint of sickness, or other symptoms of the disease. There has first been perceived an uneasy itching sensation commonly in the legs, and, upon pulling down the stockings, streams of thin dissolved blood followed; a ghastly yellow color quickly diffused itself over the whole body; and the patient has been carried off in less than forty-eight hours.

"The fifth is, a sort of sandy soil, commonly a small, loose, white sand, such as that at Pensacola, Whydah, and the island of Bonavista, which is found by experience to be injurious to health." \*

*Means of preventing Infection.* — A disease is said to be infectious, or contagious, which has the power of communicating itself to a person in health, and of producing a disease similar to itself. Of this class are many diseases, particularly fevers, which, under circumstances favorable to the production of an infectious air, are communicated by the sick to other persons exposed for any time to their noxious effluvia. As soon as a person on board is seized with an infectious or contagious disease, means must be employed to prevent its spreading.

The sick must be immediately separated from those in health, and all unnecessary intercourse between them prohibited.

The utensils and articles of clothing about the sick must be frequently changed, immersed in cold water, and washed clean when taken out; and the bedding be well smoked.

When death occurs from an infectious disease, destroy all the clothing and bedding around the body at the time; as it is loaded with infectious effluvia.

The discharges from the patient should be immediately removed, and the floor be rubbed daily with wet rags.

The sick should be removed for a short time, and their berths and the parts of the ship adjacent be well washed, smoked, and sprinkled with vinegar, and whitewashed with quick lime; and their clothes and bedding exposed to the fumes of burning sulphur or tar.

Promote ventilation by making fires in different parts of the ship; as the frequent admission of pure air from without is a sure means of preventing the spreading of an infectious disease.

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\* An Essay on Diseases incidental to Europeans in Hot Climates.

After using all these precautions, infectious matter may still be remaining in the ship after the disease disappears, which can be destroyed only by fumigation. To cleanse the ship effectually, close the hatchways for a few hours and fill between the decks with the fumes of burning sulphur, or of bituminous substances, and afterwards wash the decks, and inside of the vessel with hot vinegar. Place pots of tar over a slow fire; or pieces of red-hot iron in pots of tar; and put them into the hold, and lower parts of the ship.

These various modes of purifying a ship have been suggested, that one form might be adopted when, from any circumstance, another more eligible could not be. But *the most effectual means of preventing infection* is chloride of lime, used in the manner directed in the former part of this work under the head of *Putrid Fever*. This has superseded the use of all other articles. If it cannot be procured, the next best means is, the nitric or muriatic fumigation, as prescribed under the same head.

*Effects of the change of Air from a Hot to a Cold Climate.* — In sailing from a hot to a cold climate, the exposure to which sailors are liable lays the foundation of dangerous diseases. If the air be pure and dry, and the men well clothed, but little danger to the health is to be apprehended; but when the weather is wet and cold, exposure often produces diseases of the lungs or joints. Consumption and rheumatism are, by these means, not unfrequently brought on, and either break down the constitution, or partially destroy the use of the limbs. In a healthy condition of body, the extremes of heat and cold are borne without injury; but in feeble frames the case is different. Frequent changes of climate gradually affect the health, and bring on diseases of a chronic kind. Cold with moisture, after hot and close weather, when applied suddenly and irregularly, or when the body is overheated and perspiring, is a frequent cause of acute or chronic diseases.

Besides sudden vicissitudes of weather, sailors are subjected at sea to the unhealthy influences of dews and night air. Acquiring as they do in a hot climate, the habit of wearing but slight apparel, they continue the same practice when arrived in a colder latitude; and lay the foundation of future painful and fatal diseases by such unguarded exposure of their health, and inattention to personal warmth. Sudden changes from cold to heat, or from heat to cold should be cautiously guarded against, as they are liable seriously to affect the health. After remaining long in a hot climate, one should avoid arriving on the northern coast of the United States during the inclemency of the winter. The effect may be coughs, rheumatism, or other diseases, which those of a broken or delicate constitution are

unable to resist, without great care in keeping the body warmly clothed. The beneficial effects of attention to clothing will be more particularly noted under that head.

Sailors are heedless of health, and apparently regardless of consequences in their neglect of themselves; and unless the master interests himself in adopting and enforcing measures to preserve their health, it must occasionally occur, that many will be unable to perform the duties of the ship. In long voyages in high latitudes, death will follow, in some instances, from a want of care in guarding against these changes of temperature; for many diseases lie dormant in the system while in a hot or mild climate, which are rapidly matured by exposure to cold and moisture. Many, by neglecting these salutary precautions, linger out life with pain and suffering, who might have enjoyed the inestimable blessing of health.

*Clothing.*—Attention to dress is an important means of resisting the first and most dangerous effects of a new climate. Habit has much influence in enabling persons to endure cold or heat, independent of many changes in articles of apparel; but no power of habit can enable the native of a cold or mild climate, on his arrival within the tropics, to imitate the thin dresses of the natives, without the sacrifice of health, or the hazard of life. Feeling the influence of a burning sun, and little calculating on the changes of atmosphere; the sailor throws off the dress which best protects him against the injurious impressions of climate and the vicissitudes of weather, and substitutes the light and thin articles to which he sees others are accustomed. Such practices are at variance with the dictates of reason and the results of experience.

As an article of clothing within the tropics, linen is uncomfortable and unsafe; the perspired matter, instead of being thrown off, is retained by the linen, blocks up the pores of the skin, and produces chilliness often followed by disease.

As a general remark, flannel should be worn next the skin. It keeps up a uniform temperature, and permits the matter perspired to pass off, and keeps the skin warm and dry. It protects the body more securely from taking cold, on going into the open air during perspiration, than cotton or linen. The beneficial effects of flannel strongly recommend the use of it as a great preservative of the health, and as one of the means of counteracting the injurious effects of a hot climate. Where changes of atmosphere frequently occur, flannel more surely protects the system against these changes than any other article of clothing; and is generally worn by natives of colder climates, who reside within the tropics. This protection is much more necessary to a person recently arrived, than to those who are habituated to the climate by long residence. Some persons from ex-

perience have found flannel too irritating to the skin, and tending too much to heat the system. In such cases, cotton should be substituted for flannel, and will be found to be well adapted for a hot climate; as it is a slow conductor of heat, and thus protects the body against sudden changes of temperature. Those who have long worn flannel should be slow to exchange it for a thinner dress in a warm climate, as a little time may remove the objections to its use.

The head must be guarded against the vertical rays of the sun, as diseases of the brain and sudden death may ensue from exposure to their influence. White, or light colored hats, therefore, should be worn instead of black, and the dress should be white. Sailors should not be permitted to wear wet clothes, but be compelled to change them for dry. When performing duty in the night, a thicker dress is necessary than during the day, to prevent any ill effects from the moisture of the air. Awnings should be employed to protect the crew from the unhealthy influences of the sun and rain. On entering a cold from a hot climate, the dress should be of woollen, to protect the health against diseases incidental to such a change of climate.

*Food.* — Formerly the scurvy was of frequent occurrence among sailors, even in a short voyage, and might well have been called the bane of a seafaring life; at the present day it is not unfrequent in long voyages. As salt meats, in combination with other circumstances, are the cause of scurvy, a shipmaster should be apprehensive of his liability to it, and regulate the diet of the crew accordingly. Other evils to the health, besides scurvy, are caused by confining the men almost exclusively to salt meats. This kind of diet affects the blood, and converts slight bruises or scratches into ulcers of dangerous tendency, which, in a hot climate, not unfrequently destroy the use of a limb, or become gangrenous and terminate life. The means, which it is necessary to employ to prevent the ill effects of salt meats, by substituting other articles of nutriment calculated to counteract or entirely defeat its injurious influence, I have described in the former part of this work under the head of *Scurvy*.

These dangers are all easily removed by timely attention on the part of owners, in providing a proper supply of the requisite articles of food during the voyage. Indifference to these wants can arise only from sordid meanness, which shuts out from the heart all sympathy for others, and knows no good but the accumulation of wealth. To furnish a ship with provisions of a poor quality, or with the least possible quantity, is inhumanity aggravated by deception. Sailors engage to perform the duties of the ship with the understanding, that the supplies shall be such, as their health and labor may require. Under these cir-

circumstances, to furnish poor provisions, or to provide a bare sufficiency, is a reasonable ground of complaint on the part of the crew, as the owner fails to perform his obligations. Before the commencement of the voyage, the master should see that every article of food requisite for the crew is supplied, as minutely as he would every thing appertaining to the ship.

As bread is one of the principal articles of food at sea, great care should be taken in preserving it from becoming mouldy and generating insects. It should not be exposed to the air but put into tight casks, selecting that which is hard baked and of good quality. As bread is liable to become injured in a hot climate, flour will be found to be much more salutary, on account of the different properties it possesses, and the various forms of diet into which it may be prepared. Flour will keep sound at sea much longer than bread, occupies much less room, and, by being fermented and baked, counteracts the injurious effects of salted meats. New bread would have a salutary effect in health and in sickness; and may be made at any period of the voyage by laying in a store of yeast, preserved in the manner recommended in the works of Dr. Clark.

"Spread yeast thin on clean boards, expose it to a moderate degree of heat till its humidity is so far evaporated, that it has a granulated appearance, and feels dry to the touch; then put it into small bottles, or phials which are to be well corked and sealed. When yeast is wanted for baking, mix a pound of molasses, honey, or sugar with a gallon of hot water, and when this has cooled so as to be blood warm, or between the ninetieth and one hundredth degree of Fahrenheit's thermometer, mix with it a little of this preserved yeast. Let them be stirred together and kept in a moderate degree of warmth, and a brisk fermentation will ensue, which will produce good yeast." \*

On entering the tropics, the appetite soon becomes impaired by the debilitating influence of the heat upon the stomach. Under such circumstances, errors in quantity or quality of food cannot fail to affect the health, and make the constitution an easy prey to subsequent disease. Tender animal food, in small quantities, with well-baked bread or ship biscuit, will form a salutary dish with a due proportion of vegetables; and of all vegetables rice is, without exception, the most unirritating, nutritious, and easily digested. Fevers, dysentery, or cholera morbus are often produced by a surfeit of fruit or gross food, and especially by undue mixtures in the stomach, such as flesh, fish, and fruits taken at one meal. Fish is a wholesome food, and should be frequently caught both at sea and in port. In the form of a soup, warmed with spices, and if necessary, rendered

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\* Observations on the Diseases which prevail in Long Voyages to Hot Countries.

palatable by the addition of lime-juice, they contribute, more than any other food, to the recovery of health and strength, and to the prevention of the fatal effects of fevers in hot climates. Fruits may be indulged in, but with prudence; as excess in quantity irritates the stomach and bowels, and tends to induce bowel complaints.

In hot climates a regard to diet is indispensable to health. Medical writers on tropical diseases recommend a food known in India by the name of *Curri*, as a powerful means of counteracting the influence of the warm and sickly seasons, and of preserving health. It is well adapted to the West Indies and the southern portion of the United States. The following receipt for preparing this food is extracted from the writings of Dr. Lind.

“Two chickens will make a *curri* for four or five persons. The chickens, after being clean picked and washed, are cut up raw into the usual pieces of wings, legs, thighs, side bones, rump, breast, neck; the liver, gizzard, and heart are thrown in. One or two quarts of water are made to boil; three or four ounces of mutton suet, or butter, are thrown into the boiling water with the meat; and the following ingredients, previously prepared and beat up into a paste in a clean mortar; a table-spoonful of turmeric, half a table-spoonful of powdered ginger, two tea-spoonfuls of red pepper, and the like quantity of black pepper, half a dozen grains of pimento and of cardamom, one or two cloves of garlic and a dozen large onions; all these ingredients, well beaten into a paste, are added to the meat, and the whole is boiled until the chicken is sufficiently dressed, and the spices blended into soup. This is served up in a deep dish, with a similar dish of rice well and dry boiled; the rice is first placed in a plate, and the *curri* meat and soup poured over it with a spoon. Acids are used according to taste; and catsup is sometimes mixed when it is made in the soup manner. This dish may be made of any fresh meat cut up to spoon-meat size, as veal, mutton, lamb, whole eggs, tripe, shrimps, lobsters, white-fish, or oysters. This food, which gives a high relish for water as a drink, produces a most salutary effect on the whole system; the stomach is strengthened; the spirits exhilarated; the necessary evacuations are promoted without violence or excess.” \*

*Drink.* — Water, when perfectly pure, is the most salutary and natural drink. It is sometimes impregnated with animal and vegetable substances, which is readily known by its color, taste, or smell. Fresh water should be taken in at every port, carefully selecting it from running streams, that it may be free as possible

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\* An Essay on the Diseases incident to Europeans in hot Climates.

from all impurities. These impurities are likely to be present in hot climates, as putrefaction is more rapid than in higher latitudes. As sea provisions, in a peculiar manner, require a free use of liquids, particularly in hot climates, it is important to use all possible means to preserve it sweet, and to restore it when it becomes putrid in the course of the voyage. Great care is necessary in regard to the water casks, as those, which are made of new and soft wood, will not keep their contents so purely, as those, which are harder and well seasoned. Casks may be made to contain water pure for almost any length of time by charring the inside, and thus preventing the decomposition of water.

Quick lime will effectually remove all impurities from the water, and preserve it sweet. It adds no injurious quality to the water, nor lessens its value essentially, as an article of drink or cookery, and should never be omitted in the supplies for a long voyage. On account of greater safety, the lime should be slacked, as, if unslacked, it might endanger the safety of all, should water get to it. A pint of quick lime thrown into a cask of water is sufficient to cleanse it effectually, whenever it is found to be thick, or of an unpleasant smell. This is the best mode, and should be employed in preference to every other, but other substances will partially correct the impurities of water, as alum, cream of tartar, vinegar, and burnt bread.

Filtration is another mode of purifying water, which not only removes all the particles from it, but destroys its unpleasant smell and taste. A dripping stone would not furnish enough for the crew, as the process is slow. Water may be purified by being strained through clean sand, gravel, or charcoal, or by thoroughly exposing it to the action of the air in a divided state, letting it fall from one vessel into another by drops. The following expeditious mode of filtering water is suggested by Dr. Blane.

“Let the narrow mouth of a large funnel be filled with a bit of sponge, over which let there be a layer of clean gravel or sand covered with a piece of flannel, and over the whole another layer of sand. Muddy or offensive water being poured upon this, runs or drops out clear; and care must be taken to change the sand, sponge, &c. frequently, as they will become loaded with the impurities of the water.”\*

As the free use of fresh water is so necessary for the comfort and health of the crew, an allowance should never be insisted on without the most urgent reason. In cases of great scarcity of water at sea, it has been found that thirst may be removed by washing the body with sea water. There is great danger in drinking cold fluids when the body is heated, particularly when in a profuse perspiration.

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\* Observations on the Diseases of Seamen.

The injurious effects of *spirituous liquors* in a hot climate cannot be too frequently repeated. It is a fact well known to physicians, that persons, who abstain from the use of spirit, are much more likely to recover from sickness than those who are accustomed to the use of it. Persons who practise total abstinence enjoy better health, and are better able to endure labor than those who indulge in this poisonous liquid. Spirit is not necessary in the performance of any duty, either on board the ship or on shore; whether under exposure to unhealthy weather in a moderate climate, or to the rains, dews, or nights of tropical regions. In the performance of these duties, in healthy and in sickly climates, warm drink of tea, coffee, or chocolate should be taken in preference to spirit, as they nourish the system, and enable it more effectually to resist the influences of fatigue and exposure. In a temperate climate, the destructive effects of spirituous liquors on the health is an unquestionable fact; but their effect is much more rapidly disastrous and fatal, in tropical climates. Spirituous liquors predispose the system to disease, invite its approach, aggravate its presence, and take from the constitution the ability to endure it. Of intemperance Dr. Johnson observes, "that as, in a moral point of view, it leads to every vice; so, in a medical point of view, it accelerates the attack, and renders more difficult the cure of every disease, more particularly the diseases of hot climates; because it has a specific effect on those organs, to which the deleterious influence of climate is peculiarly directed."\* Medical writers who have resided within the tropics unite in the opinion, that spirituous liquors should be utterly proscribed, and that habitual temperance is one of the most important means of preserving the health in hot climates.

*Exercise.* — In some employments in tropical climates, great danger to health and life arises from exposure to the sun's rays during the heat of the day, and to night air. In performing the various duties of the ship on board or on shore, time should be selected when both these frightful sources of disease may be avoided. It is a wanton sacrifice of life to impose duties upon the crew at noon or at night, which may be performed equally well at any other hour. Sailors on going ashore are ignorant of the dangers to which they are exposed, and exhausted by the heat of the day, or depressed by fatigue, they expose themselves to the night air, unconscious, that disease will almost inevitably follow.

To guard against these dangers and to preserve the health of the crew, the master of the ship should employ natives in such hazardous services. They may be hired at a trifling expense,

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\* The Influence of Tropical Climates on European Constitutions.

and are able to endure exposure and labor, which those from a temperate climate cannot. On arrival in port within the tropics, the powers of the body are enervated; lassitude seizes the strongest constitution; and the most vigorous feel themselves depressed by the influence of the climate. Under such circumstances, to force men to the performance of labor during the exhausting heat of mid-day, or to expose them thus debilitated to the chills of the night air, is insensibility to the sufferings of others, and a reckless abuse of power. Natives are capable of performing the labor of discharging and receiving the cargo, and should be employed in all services, which require exposure to the unwholesome influence of a vertical sun or of night air.

By adopting these precautions, the health and strength of the crew are preserved; and they are enabled successfully to perform the duties of the voyage. By inattention to these particulars, the lives of many are lost, the labor of the survivors is increased, and the voyage is prolonged. The use of other means for preserving the health of the crew must depend, in a great measure, upon their own individual efforts; as, over many of their acts, the master of the ship can exercise only a slight control. But, whether they shall preserve their health, by avoiding labor in the sultry heat of the noon-day sun, by guarding against exposure to the chills and fogs of night air, and by refraining from long-continued and exhausting services, must be as his will shall dictate. Feeling the responsibility of his situation, and knowing the dangers to which they may be exposed, he will interpose his authority to protect their health and lives.

When it is necessary that seamen should perform duties on shore, where they may be exposed to the unhealthy influence of the sun and night air; the precautionary means recommended by Dr. Lind should be adopted.

"I would advise all who are employed in cutting down wood, or in other laborious and dangerous services in hot climates, during the heat of the day, to have the head covered with a bladder dipped in vinegar, and to wash their mouths often with vinegar; never to swallow their spittle, but rather to chew a little rhubarb, or some other bitter, and spit it out frequently; to stop their nostrils with a small piece of linen or tow, dipped in camphorated vinegar, and to infuse some bark, garlic, and rhubarb in brandy, of which a dram is to be taken either by itself or diluted with water, morning and evening.

"In the evening, before sunset, they should leave off work, and not return to their labor in the morning till the sun has dispersed the unwholesome dews and vapors. For their safety during the night, they should retire to a close hut, as the dews may penetrate a tent; here, in the absence of the sun, a constant fire should be kept; or if that be found impracticable, the apartment in which they lie should be well fumigated with gun-

powder, as fire and smoke will afford them the most excellent defence against the noxious and dangerous qualities of the night air. The smoking of tobacco in their huts, and chewing of garlic, and not sleeping on the ground, are circumstances which will also contribute to their preservation.

“If from a neglect of these precautions, the night air has made an impression upon the body, a vomit should immediately be administered near a good fire, and a plentiful sweat excited after it, which will often prevent fatal consequences. If any symptoms of a low fever still continue, as headache, sickness of the stomach, chills, &c. a blister ought immediately to be applied, as these complaints, though seemingly so slight as not to confine the patient to his bed, are deceitful, and often terminate in a fatal malignant fever. If this fever can be brought to intermit, let the bark be immediately taken, to the quantity of a quarter of an ounce, or more, in red wine, every two hours, and the patient quickly removed into a better air.”\*

*Sleep.*—In a hot climate, great caution is necessary in protecting the body against exposure to the dews of the night and currents of air during sleep. Such exposures will almost inevitably induce fevers and other diseases. During sleep the system is peculiarly susceptible to impressions; and causes, which in the hours of wakefulness would have no influence, then exert a dangerous and often fatal power. A regard to this injunction cannot be too much heeded. When the body is heated by labor during the day in a tropical climate, the sailor lies down to repose in the cool open air, or between decks where currents of air may pass over him, unconscious that this momentary refreshing may cost him his life. The body should be kept cool during sleep, as a means of obtaining more rest and thus acquiring more vigor; but this must not be attempted in the open air, where dews, rains, and noxious exhalations from marshy grounds may render it extremely unsafe.

During sleep the body should be covered with thin clothing, to defend it against the moisture of night air. As the atmosphere, within the tropics, becomes cool immediately after sunset, and the chill of the evening, succeeding the heat of the day, is sufficiently powerful to check perspiration, it is much more prudent to wrap a thin covering round the body, and to sleep even too warm, than to make the hazardous experiment of exposing the naked body to the night air. In a hot climate, the extremes of heat and cold should be equally avoided during sleep. By excess of heat, repose is disturbed and the system unrefreshed. Cold applied to the surface, by crowding with blood deep-seated and important organs, is a sure means of inducing dangerous and fatal diseases.

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\* An Essay on Diseases incidental to Europeans in Hot Climates.

*Moral Influences.* — The mind exerts a powerful influence over the health of the body. This effect has been often demonstrated in the lingering restoration to health of seamen, who have been wounded in battle followed by defeat; and in the much more rapid improvement of their fortunate and victorious opponents. Grief depresses the mind, and has a corresponding influence upon the whole system; gradually impairing its healthy action, and making it more susceptible of disease. But joy, by its exciting and invigorating power over the mind, will go far towards restoring the health of the body. By this influence of the mind, despondency as certainly predisposes to disease, as cheerfulness does to counteract it.

Such being the influence of the mind upon the body, the health is affected by moral causes, and preserved by a control of the passions. A person under the excitement of passion is more susceptible of disease than in the calmness of contentment. Fear, by debilitating, makes the system an easy prey to disease. These are important truths, and furnish wholesome advice for the preservation of health. In all climates virtue is its own reward, but in a tropical climate a deviation is more pernicious and destructive than in any other. "For my own part," says Dr. Barton, "so thoroughly convinced am I, that the moral discipline of those who are exposed to physical inroads on health by climate, duty, or fatigue, strengthens the constitution, and protects it under great straits of privation, teasing trial, and excessive exposure — that I am surprised this view of the subject is not more frequently presented by medical men, both for its sanative precepts, and its social beauty."\*

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#### SEASONS OF SICKNESS, AND DISEASES PREVAILING AMONG STRANGERS IN DIFFERENT SEAPORTS IN THE WORLD.

The following pages are added as a sequel to the Advice for the Preservation of Health in Hot Climates; but the subject will not be limited to tropical regions. To know at what season sickness commonly prevails in a port, and what diseases are incidental to strangers, is important information for seamen and passengers. It is an additional means for guarding their health, as it enables them to anticipate the dangers of disease, and to make use of proper precautions against its exposure. This sketch, condensed from the writings of Drs. Clark, Johnson, and Lind, is not intended minutely to describe diseases, but to

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\* Hints for Naval Officers cruising in the West Indies.

point out the sickly seasons, and to enumerate those complaints which most frequently occur among strangers.

*Mediterranean.*—The winds, which alternately blow over this inland sea, are the dry winds from the south-east, the cold winds from the north-west, and the burning sirocco from the great desert. The abrupt vicissitudes of the climate make the shores and islands of the Mediterranean, not a desirable residence for strangers who are invalids, particularly for persons subject to lung complaints. Consumption is a frequent disease, and when approaching, there is no hope or safety to the patient but in a speedy retreat before the autumn sets in. Milder attacks of the lungs, in the form of catarrh are common. In the months of January and February the air is clear, temperate, and uniform, and this is the only season in which consumptive invalids can safely sail on the Mediterranean, or reside on its shores. Along the marshy shores on the European side, intermittent and bilious fevers of a severe form frequently prevail among persons recently arrived.

The air of Gibraltar is healthy. In Sicily the summer is oppressively hot, and the winter seldom very cold. Summer and autumn are the unhealthy seasons, when fevers of a bilious form, cholera morbus, and bowel complaints are common. The same remarks may be made of Corsica, Minorca, and Majorca. Sardinia is the most unhealthy island in the Mediterranean.

In Egypt, from March to November, the heat is oppressive to all who are unaccustomed to it. The Delta is unhealthy, from the overflowing of the Nile, during two or three months in the summer. After the heat of the day, the copious dews of summer nights are productive of disease. On ascending the river, the country is exposed to the vapor arising from the burning sandy deserts which border it. The diseases produced by these causes commence in May and end in September. The latter end of summer is the most sickly season, when strangers are apt to be seized with bilious disorders, dysentery, and fevers. Inflammation of the eyes is a frequent and severe disease among new comers. In some seasons, as the waters of the Nile subside, the plague commences its ravages on the coast of Africa, and extends to the shores of Europe and Asia. The ports along the Barbary coast are healthy.

*Western Africa.*—The coast of Western Africa is, in most places, low, damp, and swampy; fogs hang over the land morning and evening, and heavy dews fall at night. The season is divided into wet and dry. The wet season continues about four months, generally beginning with July and ending with October, and is very sickly. The dry season is comparatively healthy. In the wet season, persons unaccustomed to

the climate seldom escape a fit of sickness, and the diseases which prevail are of great violence and mortality. These are, yellow fever, intermittents, bilious diarrhœa, dysentery, and cholera morbus. Fever is the most fatal, and may attack strangers at all seasons of the year. Dysentery prevails on the Gold Coast more frequently than on any other. The less dangerous diseases which attack new comers are, the dry belly-ache, and the Guinea worm, but these seldom prove mortal.

With reference to particular places, it may be observed, that the settlements at the mouths of the rivers Gambia and Sierra Leone, and those throughout the greater extent of the Grain, Ivory, and Gold Coast are not more healthy to persons recently arrived than other settlements on the coast. The English, Dutch, and Danish colonies at Apollonia, Dixcove, Succoondee, St. George del Mina, and Cape Coast Castle, partake of the quality of soil common to the whole coast, and are alike fruitful in the diseases which prevail in tropical climates.

The Acerah country is an elevated plain, of a dry and sandy soil, and is particularly favorable to the health of strangers. The diseases, which abound in all the country thence to the river Gambia, very seldom occur here. Such is the comparative salubrity of this climate, that persons resort here from the neighbouring settlements for the benefit of their health, and derive great advantage. The rains commence in May and end in August, but, from the quality of the soil, they are not productive of sickness. During the dry season, the sea and land breezes are regular, and the dry east wind has a remarkably beneficial influence in restoring the sick to health.

The ports on the rivers which flow into the ocean along the Slave Coast are much frequented for commercial speculation. Half of the new comers who ascend these rivers never return. The diseases which prove so fatal to crews of vessels are those enumerated at the commencement of this article.

There is a near resemblance in the appearance and nature of the diseases which attack strangers on the coast of Western Africa, but their violence and mortality, in the rainy season, are influenced by the situation of the place and its ventilation.

*African Islands.* — The Canaries are delightful for the mildness, purity, and healthiness of their climate. Persons suffering from the heat and diseases of the coast, are immediately refreshed and strengthened by the air of these islands.

The Cape Verds are extremely hot and unwholesome. It is dangerous to pass the night in the open air, for the great heat is often succeeded by a sudden cold, which frequently proves mortal to such as are exposed to it. Strangers suffer less from diseases in St. Antonio and St. Nicholas, than in either of the other islands in the cluster, during the rainy season, which begins in July and ends in November.

The climate of St. Helena is temperate and healthy ; equally removed, through the whole year from the extremes of heat and cold.

Madagascar abounds with all sorts of refreshment. From April till November, the weather is dry, clear, and sultry ; but the heat of the climate is tempered by the sea and land breezes, regularly succeeding each other. During this period strangers enjoy good health. The rainy season is from November to March, when the climate is very unhealthy and fatal to new comers.

Similar remarks are applicable to Mascarennas and Mauritius. Bourbon is not, however, so unhealthy during the rainy season as the Bay of St. Augustine in Madagascar.

The Comoro Islands are unfavorable to the health of foreigners. Voyagers stopping there for wood or water should guard against the destructive influence of sleeping on shore.

*China.*—Canton, Wampoa, and Macao are the only places in China frequented by Americans. The heat of these places is excessive in summer. In autumn the days are sultry, but the nights chilly. The vicissitudes of the weather in the winter months are more rapid than in any other part of the world.

In July and August the climate is exceedingly sultry, and the seamen living at Wainpoa are subject to those dangerous fevers, which are incidental to hot climates. In November these fevers change into intermittents. At this period dysentery and bilious diarrhœa are the prevailing diseases ; and if neglected at first become frequently dangerous and always very troublesome, often baffling the power of medicine, till a change of climate is produced by going out to sea. American and European residents at Canton enjoy a comparative degree of health, because of their more prudent and regular way of living. But seamen, who live irregularly, labor hard during the day, and are but illy provided with clothing to protect them from the damp and chilly winds at night, seldom escape these diseases.

*Bengal.*—At Calcutta the hot season is from March till June, when strangers are subject to cholera morbus and diarrhœa. Fevers prevailing at this period are not attended with much danger.

The rainy season commences in June and continues till October. In August, September, and October bilious fevers and dysentery are the fatal and prevailing diseases, making great ravages among all classes ; but more particularly among those who are exposed to the sultry heat of the day, the rains, dews, and intemperance. The fever is the most dangerous and malignant at the commencement of the epidemic, frequently destroying the patient in twelve hours, and generally in three or

four days, if not checked. As the cold weather comes on, the fever becomes a regular intermittent. Putrid dysentery is often combined with the fever, or frequently follows after the fever is removed.

The cold season is from the end of November till March, and is productive of no prevailing disease. During this period there is not a more delightful place than Calcutta. The complaints to be met with are, in general, the remains of former diseases.

At the other settlements on the Bay of Bengal, the sickly season happens in the same months as at Calcutta, the diseases are the same, and attended with an equal degree of malignity.

*Madras.* — Madras is the most healthy of the English governments in India. The weather is very temperate in January, February, and March; but is excessively hot in May, June, and July. The rains do not begin until October, and continue during the months of November and December. The wet season is the most healthy period in the year, as there are no evaporations in consequence of the rains, the soil being dry and there being no extensive marshes.

Persons recently arrived and who are exposed to the exciting causes of disease, are subject to dangerous attacks of bilious fever and bowel complaints. Although the air of the whole coast of Coromandel is pure and salubrious, when compared with most other parts of India, yet the diseases which occur there differ from those of the more unhealthy situations, only in their being milder in their nature and seldom epidemic.

*Bombay.* — The presidency of Bombay is more healthy than Bengal, and less so than Madras. The climate of Bombay and the whole coast of Malabar is temperate and wholesome when compared with many other settlements in India. Refreshing land and sea breezes generally begin in October and continue till the end of March. The dry season is from October to April, and the rainy season in the opposite months.

In the wet season, fevers and bowel complaints prevail among new comers. Dysentery and diarrhoea are the most frequent diseases, but they are not so fatal as in some other parts of the East Indies. There is on this coast a species of palsy, called *barbiers*, which is brought on by exposure to the cold land winds in January and February, and is easily cured by a sea voyage.

*Asiatic Islands.* — Manilla, the capital of the Philippines, is the most healthy of all the European settlements in Asia. In June and July, the moisture of the air with the intense heat of the sun produce the diseases incidental to the East Indies. Dur-

ing the rest of the year no country is more agreeable, the climate is mild and the air pure and salubrious.

Prince of Wales's Island, near the coast of Siam, enjoys a temperate and very healthy climate.

Borneo, Celebes, and the Spice Islands abound in diseases fatal to foreigners.

Batavia, in the Island of Java, is one of the most unhealthy places in the world. From November to May is the rainy season, when malignant fevers and dysentery rage with great mortality.

Bencoolen in Sumatra is exceedingly sickly.

Columbo, the capital of Ceylon, is very healthful, but the eastern coast of the island is fruitful in bilious diseases and bowel complaints.

*Great Britain.* — An east wind on this coast is generally accompanied with a chilling and unhealthy fog, which, in some places, produces intermittents. In autumn strangers are frequently attacked with dysentery and fevers in ports adjoining low and marshy grounds. These fevers, after long continuance, are followed by dropsy or jaundice. The prevailing diseases on the British coast are fevers, acute inflammation of the lungs, consumption, and rheumatism; complaints which occur in all countries, where vicissitudes of weather are frequent, and the atmosphere often humid and cold.

*South America.* — Quito enjoys a temperate and very healthy climate. At Lima the heat is moderate, the air mild, and strangers are not subject to any complaints arising from an unwholesome atmosphere. Conception and Valparaiso are remarkably salubrious. There is no particular disease incidental to the coast of Chili.

The situation of Buenos Ayres is agreeable. The climate is greatly conducive to health; enjoying nearly the same degree of temperature throughout the year. Monte Video is healthy. The climate on the coast of Brazil is hot in the northern parts, but is tempered by the humidity of the air; in the southern parts, it is temperate and generally healthy. At Rio Janeiro strangers are subject to diseases produced by marshes in the immediate vicinity of the city. Cayenne, Surinam, and Demarara are, in some seasons, extremely fatal to persons from higher latitudes. Intermittent and bilious fevers prevail here with great mortality.

*West Indies.* — The climate of Cuba is dry and warm; the coasts of the island are unhealthy. The want of cleanliness in Havana and the vicinity of marshes contribute to the insalubrity of the city, which is subject to the ravages of the yellow fever, particularly in the months of August and September.

The shores of St. Domingo, arising from the great heat and the humidity of the soil, are sickly, and often fatal to persons recently arrived. Jamaica is comparatively healthy.

The Bermudas are the most healthy of the West India islands. The air is so salutary that sick people from the continent resort there for the recovery of their health.

Porto Rico has a delightful climate. Barbadoes is very hot, and, at some seasons, fatally sickly. Antigua, Guadaloupe, Martinico, Trinidad, and the neighbouring islands have their sickly seasons, when new comers are subject to violent and malignant fevers.

The diseases usually prevailing in the West Indies are those which are incidental to hot climates; but yellow fever is the most fatal to strangers. This fever appears at a certain season of the year, earlier or later, milder or more aggravated, according to the weather during that season. Instances, however, occur at all seasons of the year. The general healthiness of the West Indies, as well as of particular islands, varies considerably in different years and at different periods. It is liable to be affected by certain states of the air, as unusually wet, or dry and close, and by other causes, as calms, variations from the trade winds, or by unseasonable weather for the time of the year; but all have their healthy and unhealthy seasons. July, August, and September are, in most years, the sickly months; but in some seasons, the fever invades earlier or continues later.

A tropical yellow fever arises in hot, low, moist, close places when new men are exposed to miasmata, intemperance, a vertical sun, or fatigue. The joint influence of marsh miasmata, and of an atmosphere unusually and sufficiently heated, upon a person habituated to a cold or temperate climate, is of itself capable of causing the yellow fever. It is exasperated by great heat, and extinguished or mitigated by cold, and between the tropics violently attacks strangers from higher latitudes. In a temperature so uniformly high as that of the West Indies, and where decomposition is so rapidly promoted by the agency of heat and moisture; there can be very few places, where the occasional production of noxious effluvia may not be calculated upon on shore; and sometimes, also, on shipboard. The length of residence in a tropical climate seriously affects the health of a crew. A fatal fever will become general in a ship which has been for a length of time in port; while in another, more recently arrived, the sickness will be partial or altogether wanting.

*United States.*—New Orleans is situated several feet below the level of the Mississippi at high water, and the adjacent country is low and marshy. This location, so peculiarly unfavourable,

avorable to health, is the principal cause of the occurrence of yellow fever. The water of the river is, undoubtedly, a frequent cause of sickness among seamen. These waters are loaded with vegetable matter in a semi-putrid state, and are drank by sailors without being filtrated, which, during the hot season, cannot fail to produce bowel complaints. The sickly season, generally, commences in July and continues till October. It is during these months, but especially towards the latter end of summer, that persons, recently arrived from a cold or temperate climate, are apt to be seized with bilious disorders, dysentery, diarrhœa, and fevers, similar to those in the West Indies.

Intermittents prevail in Mobile in July, August, and September. Pensacola is situated on a sandy soil, and is regarded as a more healthy place. St. Augustine is unfavorable to health, from the vicinity of low and marshy grounds. The Floridas enjoy a delightful climate from November to June; but in July and August the heat is excessive. In some seasons, this coast to the Mississippi is as fatally sickly as the West Indies, but in other seasons, it is free from malignant fevers.

In Georgia and South Carolina, where the land is low and damp, the summer months are productive of bilious fevers, and bowel complaints to persons from more northern situations. Intermittents are common, and in some seasons, yellow fever prevails with great mortality among strangers arriving there in the sickly season. The climate is mild and healthy during the winter months.

On the coast of North Carolina, Virginia, and Maryland, the same complaints usually prevail as in the more southern states; but they are less violent, and the yellow fever very rarely occurs. Intermittent fever is common among the new comers in the hot season.

The climate of New England is healthy, although vicissitudes of weather are frequent, particularly on the coast. In the winter months, inflammation of the lungs, pleurisy, and catarrh are the prevailing diseases; in the summer and autumn, bilious fever and dysentery. Typhus occurs at all seasons. Intermittent fever does not originate on the coast. The variableness of the climate is a fruitful cause of consumption and rheumatism.



# A P P E N D I X.

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## MEDICINE CHESTS.

A medicine chest should contain only such medicines as are of approved use, omitting those of the most powerful kind, as they can be prescribed with safety only by a physician in attendance. The quality of the medicines is of great consequence, and the best of each article should invariably be selected. Masters of vessels should be careful to select apothecaries of reputation, and not employ any one indiscriminately. Persons unacquainted with medicines cannot be aware of the difference that exists in the quality of medicines, nor how articles, apparently the same, may be totally different in their medicinal qualities. Deception, from this source, is sometimes practised, and lives are lost by the use of inert medicines.

In purchasing a medicine chest, care should be taken to select one containing, not only the requisite variety of medicines, but also the proper quantity of each article. It often happens, if there be much sickness on board, that the medicines are soon exhausted, from the small quantity put up, and thus the period of sickness is prolonged and the labor of hands lost, which the further aid of medicine might have prevented. A trifling sum is often thought to be sufficient for the purchase of a medicine chest; but it is an erroneous opinion, sometimes followed by sickness and loss of services, which might have been obviated by a few additional dollars.

A shipmaster should examine the contents of the medicine chest, and make himself familiar with the names of the articles, that he may prescribe more readily, when necessity shall require it. To his judgment and benevolence are committed, in no small degree, the lives of the crew; and humanity and interest combine to urge him to preserve their health and cure their diseases.

*List of Medicines and Surgical Materials for a Medicine Chest of the largest size, alphabetically arranged.*

MEDICINES.		DOSES.	REMARKS.
English Names.	Latin names abridged.		
Alum	Alum	. . .	a strong solution forms a useful gargle in sore mouth and throat. Burnt alum powdered is applied to fungous ulcers.
Antimonial Wine, or Wine of Antimony	Vin. Antim	5 to 10 drops	every hour to promote expectoration in cough, and every three hours to allay febrile heat.
Balsam Copaiva	Copaiva.	30 to 50 drps.	night and morning in clap, also in coughs attended with soreness of the chest.
Blistering Plaster	Emp. Canth.	. . .	spread the thickness of a dollar for blisters.
Blue Pill	Pilu. Hydr.	5 to 10 grs.	as a gentle laxative or alterative in bilious diseases, particularly useful in mild cases, or where calomel disagrees.
Blue Vitriol	Sulph. Cupri.	. . .	is applied to chancres and other ulcers to remove proud flesh.
Borax, in powder	Sod. Sub. Boras.	. . .	mixed with honey or sweetened water is useful in sore mouth and throat.
Burgundy Pitch	Pix. Eur-gund.	. . .	as a strengthening plaster.
Calomel *	Sub. Mur. Hydr.	1 to 10 grs.	a purgative, preferable to all others; ten grains of calomel mixed with fifteen of jalap is a medium dose. One grain night and morning as an alterative.
Calomel Pills	. . .	1 gr. each.	every six hours, as a stimulant in low fevers where there is great weakness. Dissolved in spirit, it is applied to a part to remove pain.
Camphor	Camph.	3 to 6 grs.	
Carbonate of Potash, or Salts of Tar-tar	Sub. Carb. Pot.	10 to 30 grs.	is used for making the saline draught, which see in the Appendix.

\* In chests of the smallest size, that have no scales, the calomel is mixed with jalap; a tea-spoonful of the mixture is an average dose.

MEDICINES.		DOSES.	REMARKS.
English Names.	Latin names abridged.		
Castor Oil	Ol. Ricin.	1 to 1 1-2 oz.	a purgative.
Lunar Caustic	Arg. Nitr.	. . .	to remove callous edges in wounds and chancres.
Chamomile Flowers	Flor. Chamo.	2 drachms	to a pint of boiling water aids the operation of an emetic.
Citric Acid or Lemon Acid	Ac. Citr.	. . .	see the article <i>Solution of Citric Acid</i> in the Appendix.
Cream of Tartar	Sup. Tart. Pot.	4 drachms	to a pint of boiling water sweetened is used as cooling drink in fevers.
Dover's Powder	Pulv. Ipec. et Op.	10 to 15 grs.	to produce perspiration in fever, dysentery, and rheumatism.
Elixir Vitriol	Tinct. Acid. Sulph.	10 to 40 drops	in sweetened water is useful in profuse sweatings, and to allay thirst in fevers.
A. Epsom Salts	Sulph. Magn.	1 to 1 1-2 oz.	a purgative.
Essence of Peppermint	Tinct. Menth. Pip.	30 to 50 drops	in sweetened water is given in spasms of the stomach and bowels, and to expel flatulence.
Flaxseed, in powder	Sem. Lin. Pulv.	. . .	used in coughs, dysentery, and strangury, and for poultices.
Flower of Sulphur	Sulph. Subl.	. . .	used internally with cream of tartar in piles, and externally as ointment in itch.
Gum Arabic	Gum. Acac.	. . .	in solution, serviceable in diarrhœa, dysentery, and strangury.
Gum Kino, in powder	Gum. Kino. Pulv.	10 to 30 grs.	as an astringent in diarrhœa, and advanced stage of dysentery.
Ipecacuanha, in powder	Pulv. Rad. Ipecac.	20 to 40 grs.	a mild emetic. See the article <i>Ipecacuanha</i> in the Appendix.
Jalap, in powder	Pulv. Rad. Jalap.	15 to 30 grs.	combined with ten or fifteen grains of calomel forms the best purgative medicine.
Mustard, in powder	Pulv. Sinap.	. . .	used in making poultices.
Nitre, in powder	Pulv. Nitr. Pot.	10 to 20 grs.	as a gargle in inflammatory sore throat.
Ointment, Balsilicon	Ung. Resino.	. . .	serviceable in cleansing wounds and ulcers.
Ointment, Mercurial	Ung. Hydr. Fort.	. . .	is applied to buboes and chancres, and is used to bring on the mercurial action either with the aid of calomel, or in cases where calomel disagrees.
Ointment, Brown or Turner's	Cerat. Carb. Zinc. Inp.	. . .	a healing ointment.
Opium, in powder, a part in pills of 1 gr. each	Opium.	. . .	as an anodyne at bed time. In cases of acute pain it is best to use laudanum.
Opodeldoc	Lin. Sapo.	. . .	to rub sprains and bruises.
Paregoric	Tinct. Op. Camph.	50 to 60 drops	used to allay cough.

MEDICINES.		DOSES.	REMARKS.
English Names.	Latin names abridged.		
Peruvian Bark, in powder	Cincho. Rub. Pulv.	1 to 2 drs.	is taken in substance in fever and ague. In infusion or decoction to remove debility.
Pill Aloes and Colocynth, or Pill Colchicæ	Pil. Alo. et Coloc.	5 grs. each	as a purgative three or four pills.
Quinine	Sulph. Quin.	1 to 5 grains	used in fever and ague; and to restore strength after sickness.
Red Precipitate	Hydr. Nitr. Ox.	. . .	is applied to ulcers to remove proud flesh.
Rhubarb, in powder	Pulv. Rhei.	30 to 40 grs.	a purgative, particularly useful in diarrhœa.
Sal Ammoniac, or Muriate of Ammonia	Mur. Ammon.	. . .	used in external inflammation as a wash.
Senna	Fol. Sennæ	1-2 to 1 oz.	a purgative.
Spirit of Hartshorn	Aq. Ammon.	. . .	mixed with olive oil is used as a wash in sprains and rheumatism.
Spirit of Nitre, sweet	Sp. Æth. Nitr.	20 to 40 drops	is given to allay febrile heat, but not where inflammation is present.
Sugar of Lead	Acet. Plumbi	. . .	one or two grains to an ounce of water in inflamed eyes, and as an injection in clap. For a wash over the skin a strong solution.
Syrup of Squills	Syr. Scill.	1 to 2 drms.	expectorant in coughs and colds.
Tartar Emetic	Tart. Antim.	. . .	a powerful emetic. See <i>Emetic Draught and Solution of Tartar Emetic</i> in the Appendix.
Tincture of Bark	Tinct. Cincho. Comp.	1 to 2 drms.	in water or wine for a debilitated stomach.
Tincture of Flies	Tinct. Canthar.	10 to 20 drops	used in gleet and incontinence of urine.
Tincture of Guaiacum	Tinct. Guaiac.	2 to 3 drms.	in chronic rheumatism.
Tincture of Muriate of Iron	Tinct. Mur. Ferri	15 to 25 drops	used in debility of the urinary organs, and in spitting of blood from weakness.
Tincture of Opium, or Laudanum	Tinct. Opii	10 to 30 drops	as an anodyne. In acute pain one hundred drops or more may be taken every twenty minutes till relief.
Tincture of Myrrh	Tinct. Myrrh.	1 to 2 drms.	as a gargle in spongy gums and sore throat.
Tincture of Rhubarb	Tinct. Rhei.	6 to 8 drms.	a purgative, particularly serviceable in diarrhœa, and in weakness of the bowels attended with pain.
Tincture of Senna, or Elixir Salutis	Tinct. Sen. Comp.	1-2 to 1 oz.	mixed with castor oil is useful in cramps and pain of the stomach and bowels.
Turlington's Balsam	Tinct. Benz. Comp.	30 to 40 drops	a popular application to cuts and fresh wounds.
White Vitriol	Sulph. Zinc.	1 to 2 grs.	in an ounce of water, in inflamed eyes, and as an injection in clap.

## INSTRUMENTS, DRESSINGS, UTENSILS.

Adhesive Plaster.	Needles.
Assorted Phials.	do crooked.
Bougies.	Penis Syringes.
Calico Rollers.	Phial Corks.
Castile Soap.	Pins.
Catheters.	Probang.
Clyster Syringe, or Gum Elastic enema bag.	Scales and Weights.
Funnel, either Wedgewood or glass.	Spatula for mixing ointment, making pills, &c.
Flannel rollers.	Sponge.
Graduated Glass, for measuring fluids.	Tape.
Lancets.	Tile for ointment and pills.
Leather for plasters.	Tooth Instrument.
Lint.	Tow.
Mortar and Pestle, either of Wedgewood or glass.	Tourniquet.

## STORES FOR THE SICK.

Arrow Root. Pearl Barley. Rice. Sago. Sugar. Tea.  
Vinegar. Wine.

In a Medicine Chest intended for a ship bound to a healthy climate, all the contents enumerated in the foregoing list may not be necessary. In such cases, the apothecary will be governed in the selection and quantity of medicines by the destination of the voyage, and the price to which he may be limited by the owner or master. In a Medicine Chest of a smaller size, the doses and remarks applicable to each article may be readily referred to, as they are arranged in alphabetical order.

Table of *Weights* and *Measures*, used in the dispensing of medicines.

## WEIGHTS.

To express the quantity of solid bodies, the following kind of weight is employed, dividing the pound in the following manner.

The pound	} contains {	Twelve ounces.
The ounce		Eight drachms.
The drachm		Three scruples.
The scruple		Twenty grains.

The smallest weights in the box are grains. These are from half a grain to six grains; the half grain is merely marked with

a stamp, the others, besides this stamp, have a number of dots, correspondent to the number of grains of each. There are five other weights in the same box, the respective denominations of which are plainly marked, thus.

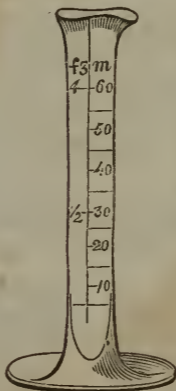
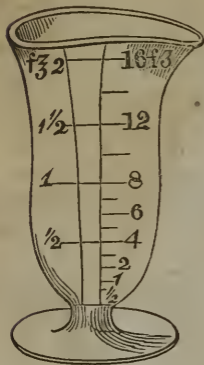
Half scruple is marked,	℥ss.
One scruple	℥i.
Two scruples	℥ii.
Half a drachm	ʒss.
One drachm	ʒi.
Two drachms	ʒii.

### MEASURE.

To express the quantity of liquids, the following measures are employed, dividing the gallon in the following manner.

The gallon	} contains	{	Eight pints.
The pint			Sixteen fluid ounces.
The fluid ounce			Eight fluid drachms.
The fluid drachm			Sixty drops.

The Glass Measure has a graduated scale, marked from half a fluid drachm upwards to two fluid ounces. The first line marks half a drachm, the second one drachm, the third two drachms, the fourth three drachms, the fifth four drachms, or half an ounce, and so on.



The Minim, or Drop Glass, is used for measuring drops, from five up to sixty drops, or one drachm, owing to the disproportionate size of the drops of different fluids obtained by other modes.

In casual measure, a tea-spoon of the ordinary size holds sixty drops; a table-spoon, half a fluid-ounce; a wine glass, two fluid ounces; and a tumbler, half a pint.

## DOSES OF MEDICINE.

Males above twenty-one will require the full doses of medicines prescribed in this book; those between ten and fifteen, only one half; and those between fifteen and twenty-one, only three fourths.

In prescribing for passengers on board a ship, it should always be kept in view that females require smaller doses than males of the same age.

Persons in advanced life require less powerful doses of medicine than those of middle age.

Occasionally it occurs, that the least active remedies operate violently on some individuals, owing to a peculiarity of stomach, or rather disposition of body. When this is known, it should always be attended to.

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## MEDICINAL PREPARATIONS.

*Emetic Draught.* — For an emetic dissolve eight grains of tartar emetic in half a pint of warm water, of this one tablespoonful may be given every ten minutes, till free vomiting takes place. In important and critical cases, a larger quantity may be given at once. The operation of the emetic should be assisted by drinking freely of warm water, after the vomiting has commenced. When the emetic draught is taken in such doses as fall a little short of vomiting, it usually operates on the bowels, and frequently acts in this way when full vomiting has been produced.

If the vomiting produce cramp or severe pain in the stomach, give from thirty to fifty drops of laudanum in a tea-spoonful of warm water, and apply to the stomach flannels wrung out in hot water. To stop the vomiting after a sufficient operation, give a small draught of warm gruel made very salt, or warm salt water.

This form of emetic is preferable to all others, where the object desired is, not simply to relieve the stomach from offensive contents, but, by active vomiting, to break up the disease at its outset. Where the constitution is very feeble, or when a forcible operation is unnecessary, *ippecacuanha* is to be preferred.

*Ipecacuanha.* — This is a mild emetic, and is the best where moderate vomiting only is necessary, or where it is only requisite to unload the stomach, or where the reduced strength of the patient forbids the risk of violent vomiting. But in cases which demand active and powerful vomiting, it is necessary to make use of the *Emetic Draught*.

Mix thirty grains of ipecacuanha in a little warm water and take; this may be repeated, if the first dose fail to produce the desired effect. Aid the operation by drinking warm water.

*Solution of Tartar Emetic.* — Dissolve one grain of tartar emetic in an ounce of warm water. A tea-spoonful may be given every hour, gradually increasing the dose unless it produces vomiting or purging. When this solution is taken for the purpose of exciting vomiting, it should be prepared the same as the *Emetic Draught*.

*Tartar Emetic Ointment.* — Take of tartar emetic half an ounce, lard one ounce, and mix well together. The proportion of tartar emetic may be increased if necessary.

*Decoction of Bark.* — Take of Peruvian bark, in powder, one ounce, water one pint, boil for ten minutes in a covered vessel, and strain the liquor while hot. The dose is from one to two fluid ounces.

Decoction of oak bark is prepared in the same manner.

*Infusion of Bark.* — On half an ounce of Peruvian bark in powder, pour half a pint of boiling water, let it steep for two hours in a covered vessel and strain. The dose is one or two fluid ounces, three or four times a day. This is the weakest preparation of bark, and is used only where the bark cannot be taken in a more effectual form.

*Infusion of Carolina Pink Root.* — Take of Carolina pink root two drachms, boiling water, half a pint. Steep for two hours in a covered vessel and pour off.

*Infusion of Cascarilla and Canella* — Take of cascarilla, in powder, half an ounce, canella, in powder, two drachms, boiling water half a pint. Steep for two hours in a covered vessel and pour off.

*Infusion of Senna.* — On an ounce of senna pour on a pint of boiling water, cover the vessel and let it stand for an hour in a warm place. Of the infusion thus prepared, four fluid ounces are a dose, but if necessary, half or the whole pint may be given. Epsom and Glauber's salts form excellent additions, both to increase the ease and activity of its operation.

*Chalk Mixture.* — Take of prepared chalk one ounce and a half, sugar one ounce, gum Arabic, in powder, half an ounce, water one pint. Rub the chalk and gum well together, and gradually add the water.

*Febrifuge Mixture.* — Take of nitre half an ounce, water half a pint, lemon juice a table-spoonful. Mix and dissolve. Let it be kept in a corked bottle and give a table-spoonful every hour or two.

If lemon juice cannot be procured, take, as a substitute, vinegar or citric acid sufficient to make the draught slightly acid.

*Saline Mixture.* — Dissolve a scruple of subcarbonate of potash, commonly called salt of tartar, in two table-spoonfuls of water, add a table-spoonful of lemon juice, and drink the mixture immediately, while in a state of effervescence. This is for one draught.

If the fresh lemon juice cannot be obtained, to the same solution of subcarbonate of potash in water, add fifteen grains of citric acid previously dissolved in a table-spoonful of water. It is to be taken in the same manner as the former.

*Blistering Plaster.* — Spread the plaster about the thickness of a dollar, on a piece of cotton or canvass, cut to the size which the blister is intended to be, and sprinkle it with warm vinegar. Wash the part on which it is to be applied also with warm vinegar, and bind it on in order to keep it close to the skin. It should remain on twenty-four hours, after which remove the plaster, and open the blister that the water may run off. Then it should be dressed with sweet oil or simple ointment.

A blistering plaster may be made by spreading basilicon ointment and covering it with powdered flies, pressing them well in.

Blisters should be made large, from eight to twelve inches square, on which must be sprinkled a little powdered camphor. A plaster may be used two or three times.

During the operation of a blister, it not unfrequently happens that violent strangury, or an affection of the bladder will take place; when this occurs, the case must be treated as directed under the head of *Strangury*.

*Barley Water.* — Wash an ounce of pearl barley, first in cold, and afterwards in boiling water, then simmer it in a quart of water for an hour. It is a useful beverage.\*

*Toast Water.* — Let thin slices of bread be carefully toasted till browned and hard, but not burnt, put them into a vessel, and pour on as much boiling water as may be required, cover it and let it stand till cold, the liquid is then fit for use.

*Decoction of Arrow Root.* — A table-spoonful of arrow root is sufficient to thicken a pint of water. This should first be thoroughly mixed with a small quantity of cold water, and then gradually added, with stirring, to the rest of the water while boiling. Let it boil for a few minutes, after which it will be fit for use. This is an important article in the diet of the sick.

*Gruel of Indian meal, oatmeal, or flour,* is made in the same manner, but is improved by longer boiling.

*Decoction of Sago.* — The Sago should first be well washed in cold water, and then boiled till the grains are dissolved. It is a light and nutritive diet for the sick.

*Flaxseed Tea.* — This is made by boiling a table-spoonful of the seeds for half an hour in a pint of water.

*Solution of Citric Acid.* — Citric acid will keep any length of time, and may be had recourse to when limes and lemons cannot be obtained. Its medicinal qualities resemble those of lemon juice, to which it is preferable in long voyages and situations in which the juice is liable to spoil. One scruple renders pleasantly acid a pint of water.

*Solution of Cream of Tartar.* — One table-spoonful of cream of tartar dissolved in a quart of hot water, a little sweetened, makes a wholesome and pleasant drink in warm climates.

*Solution of Gum Arabic.* — This is readily formed of any consistence by dissolving the powdered gum in warm water.

*Solution of Salts.* — Epsom and Glauber's salts are an excellent cathartic, and are well adapted to a great variety of complaints. An ounce of either is a medium dose, dissolved in a pint of warm water or less. The purgative operation of salts may be increased by adding two grains of tartar emetic to the dose in solution, or by combining salts with senna

*Tamarind Water.* — Boiling water poured upon tamarinds, and allowed to become cold, forms an agreeable acid drink.

*Lime Water.* — Take one ounce of lime, boiling water one quart. Pour the water upon the lime and stir them together, cover the vessel immediately, and let it stand for three hours, then pour off the liquor, and keep it in bottles well corked.

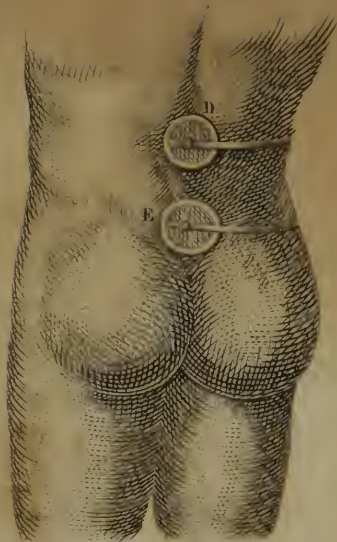
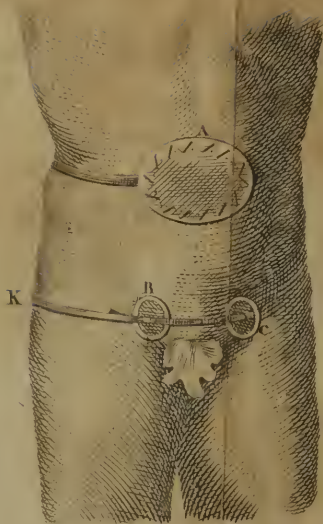
*Alum Curd.* — Shake well together a small piece of alum and the whites of two or three eggs until a coagulum is formed. It should be spread upon linen, be applied warm, and changed every two hours.

*Mustard Poultice.* — Take meal or crumbs of bread and a sufficient quantity of vinegar, boil a few minutes, mix and spread on a piece of cloth of the requisite size. Cover the surface with powdered mustard, and apply it warm. If vinegar cannot be obtained, substitute water. It should be renewed every six hours.

*Poultice.* — Poultices for ripening and bringing forward swellings, which it is desirable should form matter and break, are made by adding boiling water to so much of meal or bread and flaxseed, taking equal parts of each, as will render it of a proper consistence. Poultices should be spread an inch thick, be applied warm, and changed every hour or two.

*Acetic Fumigation.* — This is usually made by pouring vinegar upon heated iron; it is not to be relied upon for counteracting contagion, but it is refreshing to the patient and attendants.





# DR. HULL'S TRUSS.

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## EXTRACTS

FROM THE OPINIONS OF

**Distinguished Surgeons, and late  
Medical Authors,**

ON THE

**SURGICAL OPERATIONS AND CURATIVE  
TENDENCY OF**

**DR. HULL'S\***

*Newly Invented Instrument for the Frequent and  
Distressing Disease of*

**Hernia, or Rupture.**

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“About ten months ago, the attention of one of the editors of this Journal was called to Dr. Hull's new patent Hinge Truss, by the following circumstance; An eminent merchant from Charleston, had been under our care during a few weeks, for an affection of his head. On taking leave, he observed, that he thought it a duty which he owed to the interests of humanity, to make known to us the great advantages he had experienced from the use of the New York Truss. He had been afflicted with an inguinal Hernia several years, for which he had consulted many surgeons in this country and in Europe, and applied every kind of Truss that could be obtained, without being able to prevent the disease from returning on the slightest exertion. A few months before he came under our notice, he had con-

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\* Dr. Hull's office is No. 132, Fulton street, New York.

sulted Dr. Hull in New York, who applied the new Hinge Truss, with such perfect success, that no descent of the Hernia had ever afterwards occurred. The warm and urgent recommendation of our patient induced us to procure a number of the instruments thus alluded to, for the purpose of giving them a fair trial, under our own immediate observation. We have since that time applied them upon eight different patients, two of which were afflicted with double scrotal Hernia. The results of our experience have been so satisfactory, that we cannot avoid offering our testimony in favor of the new Truss, which we consider as altogether the best which we have as yet been acquainted with." — *Medical Review and Analectic Journal*. Vol. I. No. 4.

In ROBERT HOOPER'S Medical Dictionary, with additions by SAMUEL ACKERLY, M. D. *Resident Physician to the New York Hospital*, late Surgeon of the United States' Army, &c. &c. vol. 1st. page 427, Dr. ACKERLY remarks — "Dr. Hull has paid particular attention to the cure of Reducible Hernia, and has succeeded beyond all other surgeons in the cure of this frequent complaint."

"Practitioners have usually directed their patients to apply a truss. Dr. Hull, however, in attending more particularly and personally to the adaptation of trusses in different kinds of reducible hernia, found that they were all made upon erroneous principles. — He has accordingly invented a truss differing from all preceding trusses, and it has the general approbation of practitioners in this country for its *simplicity* and *utility*." In the second vol. of the same work, page 361 — after speaking of the different kinds of hernia, Dr. ACKERLY recommends the form of the truss to be used — "Trusses have heretofore been considered as a *palliative* remedy, rather than the means of effecting a radical cure. — This has arisen from the *manner* of constructing them: and although they sometimes effected the desired object, yet they more generally failed, because the pads of all the trusses heretofore applied were made *convex*. The intention of *this shape* of the instrument was to press into the opening through which the gut descended and to keep it well into its place, but while it had this effect, it tended to keep the opening from healing, and even to *enlarge it*. — This evil was not fully remedied until Dr. Amos G. Hull, of New York, turned his attention to the subject, and by his improvement in the construction of trusses, has rendered it *certain* that all recent ruptures, and those of children, may be *permanently cured*; and those of old people, and of long standing, may, in many cases, also be remedied. The pad of Dr. Hull's truss is *concave* and not *convex*; and hence the raised circular margin, by proper adaptation, presses upon the sides of the hernial opening, and tends to close the aperture and cure the hernia."

TO SAMUEL COOPER'S *Dictionary of Practical Surgery*, in the late improved American Edition, by DAVID MEREDITH REESE, M. D., Practitioner of Physic and Surgery in the city of New York, &c. the reader is also referred. "Our profession is very largely indebted to Dr. Amos G. Hull, of New York, for the valuable service he has rendered the cause of humanity, as well as the science of surgery by the indefatigable labors, and persevering ingenuity which he has devoted to this interesting department of chirurgery. After experiencing in his own practice the defects of the various kinds of trusses ordinarily employed, and suffering the inconveniences of which surgeons and patients have so long complained, he was induced to attempt the construction of an instrument, which should fulfil the *surgical indication* in the treatment of reducible hernia, an object which seemed to have been overlooked by previous inventors, and to accomplish which a knowledge of the anatomy of the parts and the mechanical operation of the truss were alike indispensable. Dr. Hull brought to this subject a mechanical genius of more than ordinary acuteness, and at the same time, an intimate and accurate knowledge of the intricate subject of Hernia itself, and succeeded in constructing an instrument which is not only applicable to every species of rupture to which a truss is adapted, but in recent cases and young children, is fully adequate to effect a *radical cure*, as proved by experience, and attested by the leading surgeons of the present day. I shall not describe the improvement and modifications to which Dr. Hull subjected his invention before it arrived to its present degree of perfection, nor speak of the difficulties he has encountered, in introducing it into general use, and acquiring for it an almost universal preference.—He has, however, at once an apology and justification for his having patented the instrument; thus deviating from what is considered ordinarily professional, in the fact, *that base and servile imitations* of his instrument would otherwise have deprived the profession and the world of the improvement itself; by bringing it into *disrepute*. This has already been a subject of painful interest to Dr. Hull and his professional friends, apart from its *manifest injustice* to the inventor. Numerous innovations and modifications have been resorted to with a view of appropriating the *surgical principles* embraced in the instrument of Dr. Hull, by those who construct their trusses of *inferior materials*, and *otherwise* defeat the utility and success of the invention.

"I have known many instances of *radical cures* by this instrument, and in some of them the truss has been laid aside for several years without the *smallest return* of the disease. It is to the interest of the profession *universally* to become acquainted with this instrument and to profit by its *superiority*." — Vol. 2d, page 369, article *Truss*.

VALENTINE MOTT, M. D. Professor of Surgery in New York, in some remarks on Dr. Hull's Trusses, says, "The great and signal benefits which are produced by this Truss, result from its strict subservience to, and accordance with, scientific and surgical principles. Its mechanical adaptation to the parts, the simplicity of its construction, the limited motion nicely graduated by experiment, to the different attitudes of the body, and to the action of the muscles, the permanency and security of its location on the body, and its pressure on the circumference of the abdominal ring, are qualities, the tendency of which is to strengthen and restore the weaker parts, to *contract the aperture*, and ultimately to accomplish a cure of the disease. The operation and effect of this Truss, is therefore, directly the reverse of all Trusses formerly in use, which being convex, tended to enlarge the dimensions of the rupture opening. I am of opinion that the union of surgical design and mechanical structure in this instrument, render it what has long been the desideratum of practical surgeons in Europe and America. And that the structure of this instrument, and the principle embraced in its mechanism, are new in their application to the disease of Hernia, and originated with Dr. Hull. I have adopted Dr. Hull's Trusses in my own practice, to the exclusion of all others.

SAMUEL OSBORNE, M. D. remarks, "Dr. Hull's Truss is so constructed, that the concave surface, of (the rupture pad) next to the body, giving the greatest pressure to the circumference, tends to approximate the parts through which the intestine has protruded, and affords ease and support. The hinge and pivot connecting the spring and pad, is so constructed with a tenon and mortice as to preserve a double-hinge limited joint, securing a uniform, easy and effectual pressure of the spring on the pad, and the pad on the opening and surrounding parts. The power of graduating the spring, and fixing the pad to any minuteness, is a hitherto unknown convenience, enabling the surgeon and even the patient, without the presence of a mechanic, to adapt a large Truss to a small body. The great mobility of other Trusses, their painful pressure on the edge of the ring, as well as the integuments, often occasion inflammation, and were suffered to have such a play as to be any way easy to the wearer, the gut is very liable to protrude, and in that state, from the improper construction of the Truss, the gut becomes *strangulated and inflamed*." "I have known Dr. Hull's Truss worn with perfect comfort, where other trusses were very tormenting, or totally unbearable; and I have known several cures effected by Dr. Hull's Truss, when it would have been impossible to attain the same result from any other known Truss."



